SCHOOL OF LAW
UNIVERSITY of CALIFORNIA • IRVINE

Legal Studies Research Paper Series No. 2015-40

Monopolization Through Patent Theft

Christopher Leslie
cleslie@law.uci.edu
University of California, Irvine ~ School of Law

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CHRISTOPHER R. LESLIE*

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* Chancellor's Professor of Law, University of California, Irvine School of Law. The author thanks Michael Carrier, Tim Holbrook, Herb Hovenkamp, Mark Lemley, and Tony Reese for comments on previous drafts. Monica Poremba and Margaux Poueymirou provided excellent research assistance.

INTRODUCTION

The patent system encourages innovators to invest in research and development (R&D) by granting an inventor a significant period of exclusivity during which no one else can make or sell a product (or use a process) that infringes the inventor's patent. Without this period of exclusivity, innovators may worry that their inventions could be copied and sold by competitors who have not invested the time and money to create the product or process. Because firms that merely copy—and do not innovate—do not have to recoup their investment in R&D, they could charge a lower price than the innovator. If copying were allowed, innovators would be less likely to invest in new projects because they would be unlikely to recoup their investment.

The patent system works only if the innovators—and not the copiers—are granted the award of exclusivity. In some cases, however, copiers may be thieves. Instead of waiting for the innovator to patent its product and then copy the patented innovation, some firms (or individuals) may copy the innovator's product and then race to the Patent Office in order to claim the invention as their own. This is patent theft.[1] If successful, the patent thief can exclude even the true innovator from making and selling the product that she herself invented.

Allegations of patent theft abound. Much litigation involves allegations of one firm stealing another firm's innovation and including it in a patent application.[2] Disputed cases of firms stealing ideas from their actual inventors and then patenting them involve, among other inventions, cattle temperature-monitoring

1. In patent parlance, some would refer to this as "derivation." The Federal Circuit has explained:

> A claim that a patentee derived an invention addresses originality—who invented the subject matter of the count? Under this attack on a patent or patent application, the proponent asserts that the patentee did not "invent" the subject matter of the count because the patentee derived the invention from another. To prove derivation . . . the person attacking the patent must establish prior conception of the claimed subject matter and communication of the conception to the adverse claimant.

Price v. Symsek, 988 F.2d 1187, 1190 (Fed. Cir. 1993) (citations omitted). The America Invents Act created "new 'derivation proceedings' that prevent a person from obtaining a patent by copying an invention from an inventor and filing a patent application before that inventor files a patent application." William Hubbard, *Competitive Patent Law*, 65 FLA. L. REV. 341, 368 n.188 (2013). Because the nuances of derivation doctrine do not affect the antitrust principles at issue, this Article will use the term "patent theft."

2. *See, e.g.*, Pension Advisory Grp., Ltd. v. Country Life Ins. Co., 771 F. Supp. 2d 680 (S.D. Tex. 2011).

devices,[3] stethoscope-cover dispensers,[4] light-up construction toys,[5] water-powered push brooms,[6] devices for capping oil spills,[7] artificial arteries,[8] and treatments for ocular disease.[9] Innovators have claimed that their ideas have been stolen by employers,[10] by people violating written nondisclosure and confidentiality agreements,[11] and by peer reviewers for prestigious scientific journals.[12] In some of these cases, the allegations of patent theft have been proven in a court of law.[13]

When the patent thief succeeds in stealing and patenting another's innovation and then using the exclusionary rights granted by the patent to monopolize a market, antitrust principles are implicated. Section 2 of the Sherman Act condemns illegal monopolization, which refers to monopolization through anticompetitive conduct instead of through competition on the merits. Patent fraud—securing a patent by lying to the Patent and Trademark Office (Patent Office or PTO)—represents anticompetitive conduct. Patent fraud generally occurs when the patent applicant misrepresents the date of its first public sale or public use of the idea for which the patent is sought or otherwise omits references to prior art that would lead the patent examiner to reject the application.

Patent theft is a species of patent fraud in that the patent applicant is lying to the Patent Office in order to secure a patent that it is not entitled to receive. However, although monopolization through patent fraud violates Section 2 of the Sherman Act, monopolization through patent theft does not. This is peculiar because monopolization through patent theft is essentially monopolization

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3. Randy Ellis, *Cattlemen Argue over Thermometer Rights: While Trying to Secure a Research Grant, a Man Says His Idea Was Stolen*, DAILY OKLAHOMAN, Jan. 15, 2007, *available at* 2007 WLNR 810000.

4. James Ritchie, *Cincinnati Entrepreneur Sues, Claims Her Invention Stolen*, CINCINNATI BUS. COURIER, July 8, 2011, *available at* 2011 WLNR 13568919.

5. Joan Verdón, *Laser Pegs, Lite Brix Court Fight on Hold*, RECORD, Mar. 13, 2013, *available at* 2013 WLNR 6237610.

6. Mike Mathis, *Lumberton Man Claims Company Stole Invention*, BURLINGTON COUNTY TIMES, Apr. 25, 2004, *available at* 2004 WLNR 17307991.

7. Laurence Hammack, *Radford Man Says Oil Firm Stole His Design for Spill Cap*, ROANOKE TIMES, June 21, 2012, *available at* 2012 WLNR 12937727.

8. Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., 670 F.3d 1171, 1175 (Fed. Cir. 2012); *see also* Marsha Austin, *Surgeon Sues Gore-Tex Makers Alleges Idea Stolen, Seeks Profits Since '72*, DENVER POST, Aug. 31, 2000, *available at* 2000 WLNR 534294.

9. *Doctor Sues Marek for $3.75 Billion*, SINOCAST, Feb. 19, 1997.

10. *See* Chou v. Univ. of Chi., 254 F.3d 1347, 1357 (Fed. Cir. 2001); *In re* Martin, 74 F.2d 951, 953 (C.C.P.A. 1935).

11. *See* Hammack, *supra* note 7.

12. *See* Kathleen Day, *Patents and Peer Pressures; Two Firms' Legal Fight May Shake a Mainstay of Scientific Research*, WASH. POST, Apr. 19, 1996, *available at* 1996 WLNR 6569918.

13. *See, e.g.*, Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co., 324 U.S. 806 (1945); Univ. of Colo. Found., Inc. v. Am. Cyanamid Co., 153 F. Supp. 2d 1231 (D. Colo. 2001). The America Invents Act has shifted the U.S. patent system from a first-to-invent standard to a first-to-file standard. Under either system, a patentee should not be entitled to patent an invention that it stole (or "derived") from the true inventor. *See* Hubbard, *supra* note 1, at 367–68 & n.188. It is too early, however, to determine whether and how this change will affect the frequency of patent theft.

through patent fraud (which is clearly illegal) coupled with stealing (which is independently illegal). In other words, coupling an antitrust violation with another illegal act creates antitrust immunity.

This Article explores how courts have created antitrust immunity for patent theft and why this rule is mistaken. Part I introduces basic antitrust concepts, including the antitrust cause of action for illegal monopolization. It shows how courts have applied these antitrust principles to patent fraud, for example, when a firm acquires monopoly power by enforcing a patent that it procured by committing fraud on the Patent Office.

Part II of this Article explores the argument—advanced by influential jurists—that a firm that monopolizes a market through patent theft does not violate the antitrust laws. In *Brunswick Corp. v. Riegel Textile Corp.*, Judge Richard Posner reasoned that so long as a particular patent should issue to *someone*, who gets the patent and how that individual acquires it are of no antitrust consequence.[14] The *Brunswick* rule is based on the assumption that patent theft does not create monopoly power; it merely transfers it from one firm to another. Judge Posner further argued that patent theft cannot affect the price paid by consumers because whoever controls the patent will charge the same profit-maximizing price. Thus, patent theft does not affect consumer welfare and is not a concern of antitrust law. Posner's opinion has become the conventional wisdom. After *Brunswick*, monopolization through patent theft does not violate Section 2's prohibition against illegal monopolization.

Part III explains why the rationales for immunizing patent theft from antitrust liability are unsound. Under some conditions, patent theft can *create* market power, not merely transfer it. For example, in a scenario involving substitute patents, if two patentable technologies could compete against each other and the owner of one of these technologies steals the other and patents both of them, the patent thief could acquire monopoly power that would not exist if the two patentable technologies were owned by competing firms. Independent of substitute patents, which firm acquires a particular patent has competitive implications because not all patent owners would exercise the exclusionary rights in the same way. Some patent owners may pledge their patents to the public domain. Others may enforce their patents less aggressively or more selectively. Additionally, not all patentholders price their patented inventions similarly. Part III describes how various regulatory, institutional, contractual, and market constraints can limit some patentees'—but not others'—ability to charge a monopoly price.

Patent theft also implicates innovation and efficiency concerns. Price competition is only one facet of how competition affects consumer welfare. Dynamic competition is what spurs innovation, ensuring that consumers benefit from products being improved and entire new categories of consumer products being developed. Dynamic competition depends on proper incentives being in place.

14. 752 F.2d 261, 266 (7th Cir. 1984).

Patent theft reduces the expected benefits of R&D. If one's ideas can be misappropriated by a rival firm who can use a stolen patent to exclude the innovator from the market, the incentive to innovate is significantly reduced. Furthermore, as an innovator in the past, the true inventor may be more likely to take the monopoly profits associated with a valuable patent and reinvest them to develop future innovations. Finally, patent theft can impose inefficiency on the economy by encouraging patent suppression and discouraging the efficient licensing of technology. For all of these reasons, patent theft can reduce consumer welfare in a manner that antitrust law cares about.

Part IV explains why monopolization through patent theft violates Section 2 of the Sherman Act. Assuming that the patent thief has monopoly power, stealing a rival's patent constitutes monopoly conduct. Patent theft is not competition on the merits, nor does it fall within any recognized antitrust defense. Both the excluded rivals (including the true inventor) and consumers who pay inflated prices suffer antitrust injury and are appropriate antitrust plaintiffs. Moreover, antitrust liability is appropriate for patent thieves who illegally monopolize a market because neither patent law nor various state causes of action provide a sufficient remedy to disgorge the ill-gotten gains of patent theft, to deter patent theft, or to compensate the victims of patent theft for their losses. Consequently, antitrust law should condemn monopolization through patent theft regardless of the fact that the true inventor could have patented the underlying invention. Patent theft should not be immune from antitrust scrutiny.

I. MONOPOLIZATION THROUGH PATENT FRAUD

The Sherman Act provides the foundation for federal antitrust law. Section 2 of the Sherman Act condemns monopolization and attempted monopolization.[15] Congress declined to define any of the Act's terms; the senators and representatives left it to federal judges to interpret language that the statute's authors could not themselves construe.[16] As a result, American antitrust law is essentially common law, as federal courts define what conduct violates Section 2 on a case-by-case basis.[17]

For almost half of a century, this common law process has taken place within the context of the *Grinnell* test. In *United States v. Grinnell Corp.*, the Supreme Court held that "[t]he offense of monopoly under § 2 of the Sherman Act has two elements: (1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from

15. 15 U.S.C. § 2 (2012). It also condemns conspiracies to monopolize. *Id.*

16. *See* Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 272 (2d Cir. 1979) ("In passing the Sherman Act, Congress recognized that it could not enumerate all the activities that would constitute monopolization. Section 2, therefore, in effect conferred upon the federal courts 'a new jurisdiction to apply a "common law" against monopolizing.'" (quoting 3 PHILLIP AREEDA & DONALD F. TURNER, ANTITRUST LAW 40 (1978))).

17. *See* Leegin Creative Leather Prods., Inc. v. PSKS, Inc., 551 U.S. 877, 899 (2007) ("From the beginning the Court has treated the Sherman Act as a common-law statute.").

growth or development as a consequence of a superior product, business acumen, or historic accident."[18] The first *Grinnell* element requires the plaintiff to define the relevant market—which entails defining the relevant product market and the relevant geographic market—and then to prove that the defendant has monopoly power in that market.[19] Monopoly power is the ability to control prices and exclude competition in the defined relevant market.[20] In general, this requires the plaintiff to prove that the defendant enjoys a dominant market share and that barriers to entry effectively keep competitors out of the market.[21] The first element is critical, as many an antitrust defendant has prevailed at the summary judgment stage by convincing the court that the plaintiff has improperly defined the relevant market or that the defendant has no monopoly power in a properly defined market.

Although Section 2 of the Sherman Act condemns monopolization, the mere act of acquiring or maintaining a monopoly is not illegal. The second element of the *Grinnell* test requires the plaintiff to prove that the defendant engaged in monopoly conduct, which courts call predatory conduct, exclusionary conduct, anticompetitive conduct or, simply, monopoly conduct.[22] Despite the unquestioned requirement that Section 2 plaintiffs must prove that the monopolist engaged in predatory conduct, antitrust jurisprudence has failed to clearly define monopoly conduct or any of its synonyms. The Supreme Court has issued few generalities or touchstones as to what constitutes exclusionary conduct beyond opining that "'exclusionary' comprehends at the most behavior that not only (1) tends to impair the opportunities of rivals, but also (2) either does not further competition on the merits or does so in an unnecessarily restrictive way."[23] Lower courts have subsequently defined exclusionary conduct as "the creation or maintenance of monopoly by means other than the competition on the merits embodied in the *Grinnell* standard"[24] where that conduct "reasonably appear[s] capable of making a significant contribution to creating or maintaining monopoly power."[25]

Some courts define monopoly conduct in relation to the contours and boundaries of competition on the merits. This, in turn, often requires courts to examine the defendant's reasons for engaging in the conduct that had the effect of excluding its competitors. As the Fifth Circuit has explained, "The key factor courts have analyzed in order to determine whether challenged conduct is or is

18. 384 U.S. 563, 570–71 (1966).

19. *See id.* at 570–79.

20. *See* United States v. E. I. du Pont de Nemours & Co., 351 U.S. 377, 391 (1956).

21. *See* United States v. Microsoft Corp., 253 F.3d 34, 51 (D.C. Cir. 2001).

22. Courts use these terms interchangeably to discuss the second element of the *Grinnell* test.

23. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 605 n.32 (1985) (quoting AREEDA & TURNER, *supra* note 16, at 78).

24. Stearns Airport Equip. Co. v. FMC Corp., 170 F.3d 518, 522 (5th Cir. 1999).

25. Taylor Publ'g Co. v. Jostens, Inc., 216 F.3d 465, 475 (5th Cir. 2000) (alteration in original) (quoting 3 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 651, at 82 (1996)) (internal quotation mark omitted).

not competition on the merits is the proffered business justification for the act."[26] The absence of a legitimate business reason for the exclusionary conduct is evidence of illegal monopolization.[27]

Absent bright-line rules and clear definitions of the operative language, the meanings of monopoly conduct and its polar opposite competition on the merits are defined on a case-by-case basis. When opinions hold that a particular fact pattern constitutes monopoly conduct, subsequent courts analogize or distinguish these earlier fact patterns. Through this common law approach, antitrust courts decide what conduct by a monopolist constitutes monopoly conduct sufficient to satisfy the second element of *Grinnell*.[28]

This process has, not surprisingly, generated much conflict and consternation as the various circuits have split on whether particular conduct by a monopolist creates antitrust liability. For example, although some courts have advocated deferring to monopolists' decisions to redesign their products to the detriment of competitors,[29] other decisions have suggested product redesigns can constitute predatory conduct.[30]

Through all of these circuit splits and scholarly debates, one species of anticompetitive conduct, however, has managed to stay above the fray—patent fraud. Although monopolization through patent acquisition is generally permissible, this assumes that the patent is valid and lawfully acquired.[31] Unfortunately, some firms acquire monopoly power by procuring patents through fraud.[32] For example, a patent applicant may intentionally conceal relevant information—such as a sale that occurred more than a year before the patent application was filed or an academic article rendering the claimed invention obvious—that would lead the patent examiner to reject the patent application.[33]

Patent fraud can provide the basis for an illegal monopolization claim. In *Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp.*, the

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26. *Stearns*, 170 F.3d at 522; *see also Taylor Publ'g*, 216 F.3d at 475 (quoting *Stearns*, 170 F.3d at 522).

27. *See Stearns*, 170 F.3d at 522 ("If the conduct has no rational business purpose other than its adverse effects on competitors, an inference that it is exclusionary is supported." (citing *Aspen Skiing Co.*, 472 U.S. at 604–05)).

28. Section 2 of the Sherman Act also condemns attempted monopolization. In *Spectrum Sports, Inc. v. McQuillan*, the Supreme Court held that "to demonstrate attempted monopolization a plaintiff must prove (1) that the defendant has engaged in predatory or anticompetitive conduct with (2) a specific intent to monopolize and (3) a dangerous probability of achieving monopoly power." 506 U.S. 447, 456 (1993). Anticompetitive conduct that satisfies the second element of *Grinnell* also satisfies the first element of *Spectrum Sports*, and vice versa. *See, e.g.*, *Taylor Publ'g*, 216 F.3d at 475, 481 (employing the *Aspen Skiing* test in an attempted monopolization case).

29. *See* Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 286 (2d Cir. 1979).

30. *See* C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1372 (Fed. Cir. 1998).

31. *See* Baxa Corp. v. McGaw, Inc., 996 F. Supp. 1044, 1048 (D. Colo. 1997) ("Therefore, ownership of a valid patent precludes antitrust liability for monopolization of a product or process within the scope of the patent." (citing Simpson v. Union Oil Co., 377 U.S. 13, 24 (1964))).

32. *See, e.g.*, Nobelpharma AB v. Implant Innovations, Inc., 141 F.3d 1059, 1063 (Fed. Cir. 1998).

33. *See* Christopher R. Leslie, *Antitrust, Inequitable Conduct, and the Intent to Deceive the Patent Office*, 1 U.C. IRVINE L. REV. 323, 324 (2011).

Supreme Court held that when a monopolist procures a patent through fraud on the PTO, competitors excluded by the resulting patent can bring suit under Section 2 of the Sherman Act.[34] Specifically, the Court held that "the enforcement of a patent procured by fraud on the Patent Office may be violative of § 2 of the Sherman Act provided the other elements necessary to a § 2 case are present."[35] The holding explicitly provides that patent fraud alone does not violate antitrust law; the fraud must cause the patentee to acquire or maintain monopoly power. Just as not every patent confers monopoly power, not every fraudulently acquired patent bestows monopoly power upon the wrongdoer.[36] Further, *Walker Process* requires not merely that the defendant acquired the patent through fraud, but that it also enforced the fraudulently procured patent against potential competitors.[37]

The Supreme Court did not precisely define what conduct constitutes patent fraud. In adjudicating antitrust cases based on patent fraud, the Federal Circuit imported the elements of common law fraud into *Walker Process* jurisprudence. Consequently, the elements of patent fraud are: "(1) that a false representation of a material fact was made, (2) with the intent to deceive, (3) which induced the deceived party to act in justifiable reliance on the misrepresentation, and (4) which caused injury that would not otherwise have occurred."[38] Despite its articulation of a multi-element test, the Federal Circuit focuses on only two elements when evaluating claims of patent fraud—materiality and intent. Materiality means that but for the misrepresentation or omission, the patent would not have issued.[39] The intent element of *Walker Process* requires that the misrepresentation or omission be made with the intent to deceive the Patent Office.[40]

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34. 382 U.S. 172 (1965).

35. *Id.* at 174.

36. *See infra* section IV.A. It is hard, however, to conceive why an applicant would commit patent fraud unless it believed the patent would generate monopoly power (though it might in the end be proven wrong).

37. *See, e.g.*, K-Lath v. Davis Wire Corp., 15 F. Supp. 2d 952, 964 (C.D. Cal. 1998) ("The Federal Circuit and Supreme Court clearly require the enforcement or assertion of the patent as an element necessary to establish antitrust liability."); Struthers Scientific & Int'l Corp. v. Gen. Foods Corp., 334 F. Supp. 1329, 1331 (D. Del. 1971) ("The Supreme Court's opinion made it clear, however, that the *sine qua non* of a Section 2 Sherman Act violation depends upon the prerequisites of a *fraudulent procurement and enforcement of a patent*."). *See generally* Christopher R. Leslie, *The Anticompetitive Effects of Unenforced Invalid Patents*, 91 MINN. L. REV. 101 (2006).

38. C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1364 (Fed. Cir. 1998). The Federal Circuit has also articulated a five-element test for patent fraud, which essentially just breaks the first element of the four-element test into two separate elements, defining patent fraud as:

> (1) a representation of a material fact, (2) the falsity of that representation, (3) the intent to deceive or, at least, a state of mind so reckless as to the consequences that it is held to be the equivalent of intent (scienter), (4) a justifiable reliance upon the misrepresentation by the party deceived which induces him to act thereon, and (5) injury to the party deceived as a result of his reliance on the misrepresentation.

In re Spalding Sports Worldwide, Inc., 203 F.3d 800, 807 (Fed. Cir. 2000).

39. *See infra* notes 208–14 and accompanying text (discussing materiality).

40. *See* Leslie, *supra* note 33, at 330.

Antitrust law appropriately condemns monopolization through patent fraud because patent fraud is not competition on the merits. Patent law and antitrust law exist in a delicate balance. In an effort to increase output and reduce price, antitrust law condemns exclusionary conduct. Patent law, in contrast, grants exclusionary rights, which generally have the effect of reducing output and increasing price. Patent law's suppression of competition is seen as necessary to encourage investment in innovation. Patent fraud upsets this balance by stifling competition in a manner that neither rewards nor facilitates innovation.[41]

II. ANTITRUST IMMUNITY FOR PATENT THEFT

Patent theft would seem to fall within the ambit of *Walker Process*. Assuming that the patentee has monopoly power—as is necessary to satisfy the first element of *Grinnell*[42]—monopolization through patent theft seems like quintessential anticompetitive conduct. If the patent thief acquires monopoly power by using a stolen patent to exclude rivals, then it is engaging in exclusionary conduct. The conduct is not competition on the merits because the monopolist did not earn a lawful right to exclude; it stole someone else's right.[43]

In contrast to garden-variety patent fraud, however, the conventional wisdom holds that patent theft cannot provide the basis for Section 2 liability. Judge Richard Posner created the antitrust rules for patent theft in *Brunswick Corp. v. Riegel Textile Corp.*[44] In that case, Brunswick alleged that it had invented a new process for making antistatic yarn[45] and that it licensed its invention to Riegel as a trade secret. Reigel, according to Brunswick, promised to keep Brunswick's invention secret. Four months after Brunswick applied for a patent, however, Riegel, too, applied for a patent on the same process of making antistatic yarn. Two years later, unaware of Brunswick's patent application, the Patent Office issued Riegel a process patent. The Patent Office did not discover Brunswick's application for the same invention until a year later. The Patent Office then instituted a patent interference proceeding to determine whether Brunswick or Riegel was the rightful inventor.[46] The Patent Office did not issue findings until

41. *See* Christopher R. Leslie, *Patents of Damocles*, 83 IND. L.J. 133, 138 (2008) ("For those fraudulently procured patents that confer monopoly power, competition is injured without any countervailing social benefit."); Allan N. Littman, *Restoring the Balance of Our Patent System*, 37 IDEA 545, 556 (1997) ("Invalid patents lack any semblance of constitutional, statutory or policy justification. Contrary to the basic policy of the patent law they obviously impede technical innovation and competition, as well as increase prices.").

42. *See infra* section IV.A.1 (discussing the first element of *Grinnell* in the context of patent theft).

43. *See infra* section IV.A.2 (explaining why patent theft by a monopolist satisfies *Grinnell*'s second element).

44. 752 F.2d 261 (7th Cir. 1984).

45. In environments where volatile gases are present that could be ignited by static electricity, such as hospital operating rooms, garments made with antistatic yarn can reduce the risk of explosion. *Id.* at 264.

46. *Id.* Although the America Invents Act has eliminated interference proceedings, it has created somewhat similar "derivation" proceedings to determine whether the first-filing patent applicant derived the invention from someone else.

more than a decade after Brunswick had filed its patent application; the Patent Office's determination was still under appeal at the time of the Seventh Circuit's *Brunswick* opinion.[47]

When the patent system failed to provide a timely resolution, Brunswick sought relief in federal court. Brunswick filed an antitrust claim against Riegel for illegally monopolizing the production of antistatic yarn. The district court dismissed Brunswick's antitrust claims as both barred by the statute of limitations and for failing to state an antitrust cause of action.[48] The Seventh Circuit affirmed on both grounds, but not before creating additional requirements for a *Walker Process* cause of action. Writing for the majority,[49] Judge Posner held:

> [F]or a patent fraud . . . [to] violate section 2, three conditions must be satisfied besides proof that the defendant obtained a patent by fraud:
>
> 1. The patent must dominate a real market. . . .
> 2. The invention sought to be patented must not be patentable. . . .
> 3. The patent must have some colorable validity, conferred for example by the patentee's efforts to enforce it by bringing patent-infringement suits.[50]

Judge Posner's opinion added two new elements to a *Walker Process* claim: nonpatentability and colorable validity of the patent at issue.[51] The core of the *Brunswick* test lies in its second element: nonpatentability. *Brunswick* drew a critical "distinction between a fraud that leads the Patent Office to issue a patent on an unpatentable invention . . . and one that merely operates to take the patent opportunity away from the real inventor."[52] Judge Posner cited no direct authority for the proposition that *Walker Process* liability can exist only when the underlying invention is not patentable by anyone.[53] He created a new legal rule in which the nonpatentability element effectively immunizes patent theft

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47. *See id.*

48. *See id.*

49. Judge Harlington Wood, Jr. concurred in Judge Posner's opinion to affirm the District Court's dismissal based on the statute of limitations, but he declined to sign on to Judge Posner's discussion about patent fraud. *Id.* at 272 ("[A]lthough enlightening, I see no need for much of the antitrust-economic-patent discussion in Judge Posner's opinion.").

50. *Id.* at 265 (citations omitted).

51. *Brunswick*'s first element—that "[t]he patent must dominate a real market"—is a reconceptualization of the monopoly power element of the *Grinnell* test. *Id; see infra* section IV.A. *Brunswick*'s third element of "colorable validity" is based on Judge Posner's assumption that invalid patents cannot injure competition. He asserted that "a patent known to the trade to be invalid will not discourage competitors from making the patented product or using the patented process, and so will not confer monopoly power." 752 F.2d at 265. Judge Posner provides no support for his assertion. Yet there is much reason to conclude it is incorrect. Even when a competitor is convinced that a patent is invalid, the costs, uncertainty, and pro-patentholder evidentiary rules and presumptions in patent litigation will cause many prudent firms to refrain from infringing the patent. *See* Leslie, *supra* note 37, at 132–37.

52. *Brunswick*, 752 F.2d at 265.

53. Indeed, James Kobak has suggested that "[a] broad interpretation of *Brunswick/Riegel* is also arguably inconsistent with that circuit's earlier opinion in *Kearney & Trecker*, 452 F.2d 579, a precedent not cited by Judge Posner." James B. Kobak, Jr., Professional Real Estate Investors *and the Future of Patent-Antitrust Litigation:* Walker Process *and* Handgards *Meet* Noerr-Pennington, 63 ANTITRUST L.J.

from antitrust liability because the monopolist who steals someone else's patentable invention in order to acquire a monopoly does not satisfy *Brunswick*'s nonpatentability element. As a consequence of this element, patent theft is beyond the purview of antitrust law even if that fraudulently obtained patent confers monopoly power on a patent thief who is not legally entitled to that patent. Judge Posner asserted that "stealing a valid patent is not at all the same thing, from an antitrust standpoint, as obtaining an invalid patent."[54] Thus, although committing fraud to obtain an invalid patent can violate antitrust law, stealing a valid patent cannot.

Judge Posner provided four related reasons for creating this new element of nonpatentability for *Walker Process* liability: (1) patent theft merely transfers, but does not create, market power; (2) patent theft does not harm consumer welfare; (3) antitrust law is indifferent to the direct victims of patent theft; and (4) patent theft does not satisfy the materiality requirement of *Walker Process* liability. First, Judge Posner asserted that the theft of a valid patent merely transfers market power from one party to another, and that antitrust law is unconcerned about the transfer of market power. The *Brunswick* opinion states:

> If the invention is patentable, it does not matter from an antitrust standpoint what skullduggery the defendant may have used to get the patent issued or transferred to him. The power over price that patent rights confer is lawful, and is no greater than it otherwise would be just because the person exercising the rights is not the one entitled by law to do so.[55]

Judge Posner's rationale for immunizing patent theft from antitrust liability assumes that patent theft does not create monopoly power. Judge Posner asserted that "[t]he theft of a perfectly valid patent . . . creates no monopoly power; it merely shifts a lawful monopoly into different hands. This has no antitrust significance . . . ."[56] Subsequent antitrust opinions have invoked *Brunswick* in non-theft contexts to hold that antitrust law is indifferent as to who holds a particular patent because consumer welfare is unaffected.[57] Courts have also adopted the *Brunswick* rationale on antitrust indifference to the transfer of

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185, 198 n.48 (1994). In lieu of direct legal authority, Judge Posner draws an analogy to the materiality element of fraud. *See Brunswick*, 752 F.2d at 265.

54. *Brunswick*, 752 F.2d at 266.

55. *Id.* at 265.

56. *Id.* at 266.

57. *See, e.g.*, PNY Techs., Inc. v. SanDisk Corp., No. C-11-04689 YGR, 2012 WL 1380271, at *12 (N.D. Cal. Apr. 20, 2012) ("With respect to this claim, the mere transfer of a valid patent 'has no antitrust significance,' but merely shifts a lawful monopoly to different hands." (quoting *Brunswick*, 752 F.2d at 266)); Carefusion Corp. v. Medtronic, Inc., No. 10-CV-01111-LHK, 2010 WL 4509821, at *7 (N.D. Cal. Nov. 1, 2010); *see also* Michael A. Sanzo, *Antitrust Law and Patent Misconduct in the Proprietary Drug Industry*, 39 VILL. L. REV. 1209, 1214 (1994) ("[I]f the defendant's inequitable conduct merely resulted in the wrong individual being assigned inventorship, the consumer would not have suffered an injury and the antitrust laws would not be applicable.").

monopoly power and have applied it to non-patent scenarios.[58] For example, one court relied on *Brunswick* for the broad proposition that "[w]here a monopoly exists, from the standpoint of antitrust law it is a matter of indifference whether one party versus another—in this case, one dealer versus another—exploits the monopoly."[59] The logical inference is that because antitrust law is not interested in who controls a particular patent, antitrust law must not be concerned with patent theft.

The second rationale for the nonpatentability element focuses on consumer welfare. Judge Posner asserted that the price to consumers would remain the same regardless of who holds a particular patent.[60] This assumes that patent theft affects neither the price nor level of output of the patented product, or products created by the patented process.[61] Judge Posner accused Brunswick itself of being indifferent to consumer welfare as demonstrated by Brunswick not seeking to have the patent invalidated, but instead asking that the patent be transferred to Brunswick.[62] Judge Posner reasoned that "no consumer interest can be discerned even remotely in a suit brought by a competitor [because] . . . a victory for the competitor can confer no benefit, certain or probable, present or future, on consumers."[63] Even if Brunswick did not manufacture antistatic yarn (as Riegel did) but instead licensed its patent, Judge Posner asserted that the ultimate price to consumers would be the same because Brunswick would extract a royalty from its licensees designed to have them charge consumers the same monopoly price that a manufacturer-patentholder would charge.[64] Invoking *Brunswick*, subsequent courts have expressed indifference as to patent ownership because "consumers would simply be subjected to the monopoly

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58. *See* Columbia River People's Util. Dist. v. Portland Gen. Elec. Co., 217 F.3d 1187, 1190 (9th Cir. 2000) ("[T]he *[Brunswick]* court pointed out that the market remained just as competitive as before the theft; the question of who owns the patent monopoly is a 'matter of indifference' to the antitrust laws."); JamSports & Entm't, LLC v. Paradama Prods., Inc., 336 F. Supp. 2d 824, 834 (N.D. Ill. 2004).

59. Lerma v. Univision Commc'ns, Inc., 52 F. Supp. 2d 1011, 1021 (E.D. Wis. 1999) (citing *Brunswick*, 752 F.2d at 267); *see also* McCabe Hamilton & Renny Co., v. Matson Navigation Co., Civil No. 08-00080 JMS/BMK, 2008 WL 2233740, at *6 (D. Haw. Apr. 9, 2008) ("Conduct that 'merely shifts a lawful monopoly into different hands . . . has no antitrust significance, although it hurts the lawful owner of the monopoly power.'" (quoting *Brunswick*, 752 F.2d at 266)).

60. *See Brunswick*, 752 F.2d at 267 ("From the standpoint of antitrust law, concerned as it is with consumer welfare, it is a matter of indifference whether Riegel or Brunswick exploits a monopoly of antistatic yarn.").

61. *See id.* at 268.

62. *Id.* at 267 ("The nature of the remedy sought shows that Brunswick, far from contesting the propriety of a patent monopoly of antistatic yarn, makes that propriety the very foundation for the judicial relief that it seeks.").

63. *Id.* at 266.

64. Judge Posner explained:

> As a rational profit-maximizer Brunswick would charge its licensees a royalty designed to extract from them all the monopoly profits that the patent made possible; and the licensees would raise their prices to consumers to cover the royalty expense. The price to the consumer would be the same as it is, today, with Riegel the only seller in the market.

Id. at 267.

patent rights of a different party."[65] The underlying assumption of this rationale is that so long as the patent could issue to someone, the patentholder's power over price is constant and thus consumer welfare is unaffected by patent theft.[66]

Judge Posner next justified the nonpatentability element in *Walker Process* cases by suggesting that antitrust law is unconcerned with the direct victims of patent theft. Indeed, Judge Posner refused to characterize Brunswick as the victim in the antitrust case because "[t]here is no contention that in asking for [its patent back] Brunswick is motivated by altruism. It wants to make as much money as it can from the patent—as much as Riegel made, or, if possible, even more."[67] Judge Posner asserted that patent theft "has no antitrust significance, although it hurts the lawful owner of the monopoly power."[68] According to Judge Posner, monopolization through patent theft cannot violate antitrust law because no one was injured other than the true creator, who is not entitled to antitrust sympathy because it wants the same monopoly that the defendant has.[69] The *Brunswick* opinion concluded that neither the true innovator nor consumers paying the monopoly price have suffered an antitrust injury and that therefore no plaintiff can bring an antitrust case for monopolization through patent theft.[70]

Judge Posner's fourth and final rationale for the nonpatentability element focused on the materiality requirement for *Walker Process* liability. The *Brunswick* opinion altered the traditional formulation of but-for materiality by holding that

> for a fraud to be material in an antitrust sense the plaintiff must show that but for the fraud no patent would have been issued *to anyone*. If a patent would have been issued to someone, the fraud could but have diverted market power from the one who had the right to possess and exploit it to someone else.[71]

Judge Posner held that stealing an invention and misrepresenting it to the Patent

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65. Reiffin v. Microsoft Corp., 158 F. Supp. 2d 1016, 1034 (N.D. Cal. 2001) ("The antitrust laws, however, are concerned with consumer welfare and not with regulating the efforts of competing parties to gain and utilize monopoly patent rights." (citing *Brunswick*, 752 F.2d at 267)); JamSports & Entm't, LLC v. Paradama Prods., Inc., 336 F. Supp. 2d 824, 834 (N.D. Ill. 2004) (noting the *Brunswick* "court could not find the 'consumer interest' in the case because consumers would not care who held the patent and thereby became a monopolist in the antistatic yarn market").

66. One district court recently relied on *Brunswick* for the proposition that "invalidity is necessary for a Walker Process claim is that a valid patent, even if procured by outright lies or thievery, does not harm consumers, because they face the same circumstances that they would have even if the misconduct had not occurred." King Drug Co. of Florence, Inc. v. Cephalon, Inc., 2014 WL 982848, at *11 (E.D. Pa. Mar. 13, 2014) (citing *Brunswick*, 752 F.2d at 265).

67. *Brunswick*, 752 F.2d at 267.

68. *Id.* at 266.

69. *See id.* at 268.

70. *See id.* ("It is then not a matter of the case having been brought by the wrong plaintiff . . . but of there being no possible plaintiff because the defendant's conduct has no tendency to injure anyone intended to be benefited by the antitrust laws.").

71. *Id.* at 265 (emphasis added).

Office as one's own is not material fraud because the patent could have issued to someone else, namely the actual inventor.[72] Some subsequent courts have adopted *Brunswick*'s new construction of materiality.[73]

Applying his new test for *Walker Process* liability, Judge Posner held that Brunswick's monopolization claim must fail as a matter of law because even if Riegel stole Brunswick's invention, Brunswick failed to allege that the invention was not patentable.[74] Indeed, Brunswick argued that it should have been issued a patent on antistatic yarn.[75] Thus, neither was the alleged misrepresentation material nor did Brunswick suffer antitrust injury. According to Judge Posner, Riegel's alleged theft did not create market power and did not harm consumer welfare.[76]

The rationales that Judge Posner articulated for the *Brunswick* rule have proven to be robust and durable in practice. Courts and commentators have signed on to the *Brunswick* opinion's holding that in order for *Walker Process* liability to attach, the fraudulently procured patent must be for a product that is unpatentable.[77] This nonpatentability element makes patent theft immune from antitrust liability for illegal monopolization. Part III challenges the conventional wisdom and explains the antitrust stake in patent theft.

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72. *See id.*

73. For example:

> For antitrust purposes, whether a patent could be issued matters more than who would possess it; if a patent could still "have been issued to someone," its market power would still have been concentrated (properly) in one party. As a result, *Walker Process* fraud must concern a material issue of patentability; otherwise, a patent would have issued regardless of any fraud, and potential plaintiffs would have suffered the same monopoly effects (but legitimately).

In re DDAVP Direct Purchaser Antitrust Litig., 585 F.3d 677, 693 (2d Cir. 2009) (quoting *Brunswick*, 752 F.2d at 265); Rohm & Haas Co. v. Dawson Chem. Co., 635 F. Supp. 1211, 1218 (S.D. Tex. 1986) ("The fraud must be *material in an antitrust sense* in that the alleged infringer/antitrust counterclaimant must show that but for the fraud no patent would have been issued to anyone." (citing Am. Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350, 1366 (Fed. Cir. 1984))).

74. *Brunswick*, 752 F.2d at 266.

75. *Id.*

76. *Id.* at 266–67.

77. *See, e.g.*, King Drug Co. of Florence, Inc. v. Cephalon, Inc., 2014 WL 982848, at *11 (E.D. Pa. Mar. 13, 2014) ("Thus, invalidity is a prerequisite to a successful Walker Process fraud claim."); Publ'ns Int'l, Ltd. v. W. Publ'g Co., No. 93 C 3074, 1994 WL 23008, at *3 (N.D. Ill. Jan. 25, 1994); Allen–Bradley Co. v. Autotech Corp., No. 86 C 8514, 1990 WL 16453, at *2 (N.D. Ill. Feb. 8, 1990) (dismissing *Walker Process* claim in part because "defendants have not alleged that the invention sought to be patented was not patentable"); Consol. Aluminum Corp. v. Foseco Int'l Ltd., 716 F. Supp. 316, 334–35 (N.D. Ill. 1989); *Rohm & Haas Co.*, 635 F. Supp. at 1221.

There is a perception that Judge Posner's position is dominant. *See, e.g.*, Arun Chandra, *Antitrust Liability for Attempting to Enforce a Fraudulent Patent*, 81 J. PAT. & TRADEMARK OFF. SOC'Y 201, 214 (1999) ("Judge Posner's standard has increasingly been accepted by courts as the test for determining materiality of the fraud committed."); Kobak, *supra* note 53, at 198 ("Many courts in *Walker Process* cases added an objective element to the claim by requiring proof of 'but for' materiality: proof that, but for the fraud, no patent would have issued. Judge Posner's decision in *Brunswick/Riegel* has proved especially influential in this area." (footnote omitted)).

III. THE ANTICOMPETITIVE EFFECTS OF PATENT THEFT

The *Brunswick* rule asserts that patent theft has no market effects because each patent has associated with it a fixed amount of market power, which is independent of which firm actually possesses the patent. Judge Posner assumed that all firms behave the same upon acquiring a patent: Any firm in possession of the patent will increase the price of the patented product and exclude infringing competitors through the threat of litigation. This Part explains how the conventional wisdom oversimplifies the matter because the anticompetitive and anticonsumer effects of any particular patent may be a function of which firm acquires the patent and how that firm acquired that patent.

A. PATENT THEFT CAN CREATE MARKET POWER

The nonpatentability element of the *Brunswick* test assumes that patent theft does not create market power, but merely transfers it (albeit improperly) from one party to another. The *Brunswick* opinion does not consider the presence of substitute patents and whether some patentholders will behave differently than others. But these are important factors in determining the relationship between patent theft and market power.

In many markets, the exclusionary power of a patent may be a function of the existence of competing patented technologies and their ownership. In *Brunswick*, Judge Posner held that in order for there to be *Walker Process* liability, the fraudulently obtained "patent must dominate a real market."[78] Judge Posner's formulation oversimplifies the relationship between patents and monopoly power. A leading treatise notes that the *Brunswick* opinion "ignores the possibility that the intellectual property owner may have market power as a result of the totality of the circumstances, not just the fraudulently obtained patent."[79] This following discussion explores how, under various scenarios, patent theft can create market power.

A patent thief could acquire or maintain monopoly power by misappropriating another's innovation even if the stolen patent did not itself dominate a market. For example, this would be the case if a firm had a monopoly protected by an existing dominant patent and realized that its rival had a competing, noninfringing technology that was not yet patented.[80] If two products, A and B,

78. 752 F.2d at 265.

79. HERBERT HOVENKAMP, MARK D. JANIS, MARK A. LEMLEY & CHRISTOPHER R. LESLIE, IP AND ANTITRUST § 11.4c n.251 (2d ed. 2013).

80. IP AND ANTITRUST explains:

> By acquiring a related patent, the monopolist might prevent present or future competition challenging its monopoly. The clearest case would be the acquisition of an equivalent patent covering the only known economic alternative to the monopolist's product or process. Such an acquisition forecloses potential competition by rivals who might otherwise have access to that patent. Even the acquisition of one out of several equivalent patents might have exclusionary effects. The acquired patent might, with further advances in the art, turn out to have been the most promising.

compete against each other, then neither alone defines a market, although the two together do. Suppose that initially Firm X has a patent on product A and consequently possesses monopoly power. Subsequently, Firm Y invents Product B, which will compete against Product A, and should receive a patent on Product B, but Firm X steals the idea for Product B from Firm Y. Firm X commits fraud on the PTO and gets the patent instead. Firm X then has a monopoly over the relevant market (defined as Products A and B). That firm may choose to suppress the second patent, which would allow it to maintain its monopoly power by thwarting competitive entry from the true innovator.[81] Or, it may exercise the patent and become the sole producer of both Products A and B. Whether the patent thief suppresses or exercises the stolen patent, if a monopolist misappropriates a rival's discovery and patents it, the defendant has maintained its monopoly power through patent theft even though the stolen patent does not dominate a market and the underlying innovation was patentable.[82] This example undermines *Brunswick*'s articulation of the market domination element—and its creation of the nonpatentability element—because a stolen patent could not define a market and yet the fraudulent procurement and enforcement could nevertheless constitute illegal monopolization. If two patents are substitutes, it matters who gets the second patent.[83]

Other areas of antitrust law besides Section 2 of the Sherman Act recognize the anticompetitive threat posed by a single firm acquiring substitute patents. For example, a conspiracy to put substitute patents within the control of a single firm can violate Section 1 of the Sherman Act, which condemns agreements that unreasonably restrain trade.[84] Similarly, merger law prohibits one firm with a

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Id. § 14.3a (footnotes omitted).

81. For example:

> [I]n the *Paper Bag* patent litigation, which reached the Supreme Court in 1908, the dominant firm had acquired a patent in a technology that competed with technology that it was already using. It did not use the patent at all, preferring to stick with its existing technology, but it also refused to license the patent to others and filed a successful infringement action against a rival firm that apparently independently developed technology that infringed the acquired patent.

Herbert Hovenkamp, *Harm to Competition Under the 2010 Horizontal Merger Guidelines*, 39 REV. INDUS. ORG. 3, 8 (2011) (discussing Cont'l Paper Bag Co. v. E. Paper Bag Co., 210 U.S. 405, 429 (1908)); *see also* CHRISTINA BOHANNAN & HERBERT HOVENKAMP, CREATION WITHOUT RESTRAINT: PROMOTING LIBERTY AND RIVALRY IN INNOVATION 295–99 (2012).

82. *See* LAWRENCE A. SULLIVAN & WARREN S. GRIMES, THE LAW OF ANTITRUST: AN INTEGRATED HANDBOOK § 15.8, at 877 (2d ed. 2006).

83. For example:

> [A] patent covering the only known procedure for making Z implies that the sole practitioner of that process will also have a monopoly of the Z product market. But once two alternative patents exist, each one of which will produce Z, each patent no longer connotes a monopoly of the Z product market. To continue a monopoly of the Z product market, both patents must be held in the same hands. The market monopoly is not conferred or protected by either patent standing alone.

HOVENKAMP, JANIS, LEMLEY & LESLIE, *supra* note 79, at § 14.4.

84. *See, e.g.*, United States v. Singer Mfg. Co., 374 U.S. 174, 196–97 (1963).

patent from acquiring the patent rights to a substitute patent if that aggregation of patents would result in the acquiring firm achieving market power. For example, the FTC thwarted a merger that would have increased the surviving "firm's ability unilaterally to exercise market power in the market for corn herbicide for post-emergent control of broadleaf weeds, by combining the two closest substitutes in the market."[85]

The antitrust agencies recognize that a particular patent could give monopoly power to one firm even when it would not confer such power on another firm. The Antitrust Guidelines for the Licensing of Intellectual Property, issued jointly by the Federal Trade Commission (FTC) and the Department of Justice (DOJ) Antitrust Division, provide that patent acquisition should be evaluated using merger analysis.[86] By way of example, the Guidelines note that if a newly patented pharmaceutical challenges the only other approved drug on the market, the maker of the existing drug cannot obtain de facto exclusive control (through licensing or sale) of the newly patented drug because the arrangement would eliminate competition in the relevant market.[87] If it would violate antitrust law for the defendant to buy the second patent, it should similarly violate antitrust law for the dominant firm to acquire that same second patent through fraud on the PTO.[88]

The stolen patent need not be for a fully realized product in order to allow a patent thief to obtain or maintain monopoly power. Patent theft can reinforce a monopolist's position by preventing the progression of technology. James Kobak notes the "antitrust significance" of "the scenario of a monopolist with control of an existing technology who wrongfully 'steals' from a prospective new entrant the patent rights to the only competitive new technology on the horizon."[89] Antitrust law recognizes how a monopolist can violate Section 2 by preventing the evolution of technology. For example, Microsoft violated Section 2 when it stifled the evolution of browser technology in order to maintain its monopoly power over operating systems.[90] Patent theft of nascent technology is another anticompetitive act that can reinforce a monopolist's position.

The stolen patent also need not represent the state of the art for the theft to have anticompetitive consequences. Even if the stolen second patent embodies technology that is inferior to the existing technology controlled by the monopolist-patentholder, "the acquisition of an inferior patent would have anticompetitive effects whenever third parties had developed, subsequently developed, or subsequently would have developed improvements that make it equal or superior to

85. *In re* Ciba-Geigy Ltd., 123 F.T.C. 842, 852 (1997).

86. *See* U.S. DEP'T OF JUSTICE & FTC, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY § 5.7 (1995), *available at* http://www.justice.gov/atr/public/guidelines/0558.pdf.

87. *See id.* § 5.7, ex. 11.

88. Indeed, the second form of acquisition is far less defensible than the first. *See infra* notes 239–44 and accompanying text.

89. Kobak, *supra* note 53, at 198.

90. *See* United States v. Microsoft Corp., 253 F.3d 34, 62 (D.C. Cir. 2001).

the monopolist's patent."[91] A leading treatise notes that "even inferior technologies can provide some, if not perfect, competition to the patentee. Indeed, high cost rivals or rivals making a somewhat inferior product provide more competition than no rivals at all."[92] This is consistent with the insight recognized in antitrust law that even an inefficient competitor can discipline a monopolist.[93]

In sum, although Judge Posner assumed that a stolen patent must drive all substitutes from the market in order for patent theft to be worthy of antitrust concern,[94] such is not the case if the thief controls the only other substitute patent or patents.

B. PATENT THEFT CAN INCREASE PRICE

The *Brunswick* nonpatentability rule assumes that whoever possesses a particular patent is irrelevant to consumer welfare and, because antitrust is only concerned with consumer welfare, antitrust is indifferent to which firm acquires the patent—the true inventor or the thief.[95] Judge Posner assumed that every patentholder will behave in precisely the same way with a patent. For example, he asserted that the fact that Brunswick was asking the court to order that the patent issued to Riegel be transferred to Brunswick demonstrated that Brunswick "wants to make as much money as it can from the patent—as much as Riegel made, or, if possible, even more."[96] That Brunswick might seek to earn its returns on the patent through licensing instead of production would have no effect on consumers, according to Judge Posner, because

> [a]s a rational profit-maximizer Brunswick would charge its licensees a royalty designed to extract from them all the monopoly profits that the patent made possible; and the licensees would raise their prices to consumers to cover the royalty expense. The price to the consumer would be the same as it is, today, with Riegel the only seller in the market.[97]

Thus, Judge Posner asserted that the price paid by consumers is fixed and unchangeable regardless of who owns a particular patent. He provided no support for that assertion.

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91. HOVENKAMP, JANIS, LEMLEY & LESLIE, *supra* note 79, § 14.3a.

92. *Id.*

93. *See, e.g.*, United States v. Am. Can Co., 230 F. 859, 864 (D. Md. 1916).

94. *See* Publ'ns Int'l, Ltd. v. W. Publ'g Co., No. 93 C 3074, 1994 WL 23008, at *3 (N.D. Ill. Jan. 25, 1994) ("Commenting on the plaintiff's burden of proving market domination, Judge Posner has indicated that courts must determine whether the patent threatens to 'drive all *or most* substitutes from the market.'" (quoting Brunswick Corp. v. Riegel Textile Corp., 752 F.2d 261, 265 (7th Cir. 1984))).

95. *See Brunswick*, 752 F.2d at 265 ("The power over price that patent rights confer is lawful, and is no greater than it otherwise would be just because the person exercising the rights is not the one entitled by law to do so.").

96. *Id.* at 267.

97. *Id.*

Not all inventors can or will pursue the same profit-maximizing strategy after acquiring a patent. The true innovator may charge a lower price. Many innovators may be constrained by contract and market conditions from exercising the market power associated with their patents. If the patent thief is not similarly constrained, it may be able to reduce output and increase price in a manner that the true inventor cannot.

1. Variations in Patent Enforcement

Patent theft can increase price because the actual inventor may decide to either not acquire a patent or not enforce it. Not every inventor entitled to apply for a patent necessarily will file a patent application. Inventors may decline to seek patent protection for many reasons. First, some firms may decide to protect their invention as a trade secret instead of patenting it.[98] Patent protection requires the inventor to disclose her invention to the public.[99] The patent right to exclude infringing competitors for twenty years is granted as the reward for disclosure.[100] In contrast, by treating her innovation as a trade secret, the inventor does not have to disclose her invention, and trade secret protection lasts as long as it takes for rivals to develop the innovation on their own. Firms that would rather not disclose their inventions may eschew patent protection.[101]

Second, some inventors may decline to patent their inventions because they do not want to exclude anyone or limit the use of their discovery. For example, during the fin de siècle, a university professor invented a method for accurately measuring the butterfat content of milk.[102] If the inventor had patented the device, it "would doubtless have yielded him a very handsome income. [But he] gave it freely to the public, saying modestly that to do so was but part of his duty as a servant of the people. . . ."[103] More recently, when George Koehler and Cesar Milstein created the technology for producing a particular type of antibody—a discovery for which they won a Nobel Prize—they declined any

98. *See* JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK 176 (2008) ("A survey of small high-tech firms indicates that the high cost of getting and enforcing patents often leads them to choose trade-secret protection instead of patent protection." (citation omitted)).

99. *See* Timothy R. Holbrook, *Possession in Patent Law*, 59 SMU L. REV. 123, 149–50 (2006); Katherine J. Strandburg, *What Does the Public Get? Experimental Use and the Patent Bargain*, 2004 WIS. L. REV. 81, 91.

100. *See* Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1562 (Fed. Cir. 1995).

101. *See* Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 494 (1974) (Marshall, J., concurring in the result) ("State trade secret law . . . in its unlimited duration is clearly superior to the . . . monopoly afforded by the patent laws. . . . [T]rade secret protection provides in some instances a substantial disincentive to entrance into the patent system . . . ."). It is possible that the true inventor may fail to secure a patent through inadvertence. For example, suppose the patent thief files a patent application eleven months after the first public use of the invention but the true inventor waits until thirteen months after that event. Under the *Brunswick* rule, the patent thief has acquired a patent that is otherwise valid. However, a patent would not have issued to the true inventor because she waited more than a year after the first public sale. *See* 35 U.S.C. § 102(b) (2012).

102. *See* MORTON I. KAMIEN & NANCY L. SCHWARTZ, MARKET STRUCTURE AND INNOVATION 19 (1982).

103. *Id.* (quoting F. W. TAUSSIG, INVENTORS AND MONEY-MAKERS 49–50 (1915)).

patent rights, which facilitated significant research in this technology.[104] University researchers may be particularly inclined to share their innovations relatively freely.[105]

Even within the private sector, empirical research suggests that different types of firms are more (or less) likely to enforce their patents. Some firms may decline to enforce patents that other firms would aggressively enforce.[106] For example, Federal Circuit Judge Kimberly Moore's scholarship as a law professor suggests that foreign firms enforce patents less often than domestic firms.[107] Sometimes companies promise to not enforce their patents, as when IBM, Sun, and Nokia pledged to limit their patent enforcement with respect to certain open-source products.[108]

Some empirical research shows that small firms are less likely to enforce their patents. High litigation costs make it harder for small firms to pursue infringement litigation.[109] They may not have the resources to go head-to-head in drawn out litigation against a larger competitor.[110] Some small firms may be

104. *See* SUZANNE SCOTCHMER, INNOVATION AND INCENTIVES 154 (2004). Unfortunately, one firm sought to commercialize the technology by creating successful applications of the technology and received broad patent rights on diagnostic tests that use the antibodies. *Id.* Although a lower court held the technology to be in the public domain, *see* Hybritech Inc. v. Monoclonal Antibodies, Inc., 623 F. Supp. 1344, 1352–53 (N.D. Cal. 1985), the Federal Circuit reversed, *see* Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1378, 1383 (Fed. Cir. 1986). Noted scholars disagreed with the Federal Circuit and noted that the opinion gave the follow-on firm "something like the broad pioneering rights that had been renounced by the inventors themselves and their sponsors. This can only have led to a lessening of competition in the market, as compared to the case that there was no patent on the pioneering technology." SCOTCHMER, *supra*.

105. *See infra* notes 125–33 and accompanying text.

106. *See, e.g.*, Eastman Kodak Co. v. Goodyear Tire & Rubber Co., 114 F.3d 1547, 1557–58 (Fed. Cir. 1997) (discussing real-world example of different companies' divergent enforcement), *abrogated in part by* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448 (Fed. Cir. 1998).

107. *See* Kimberly A. Moore, *Xenophobia in American Courts*, 97 NW. U. L. REV. 1497, 1527 (2003) ("Thus, even though foreign inventors acquire patents as often as domestic firms, they seek to enforce their patents only about one-eighth as often."); *see also* Scott K. Dinwiddie, *A Shifting Barrier? Difficulties Obtaining Patent Infringement Damages in Japan*, 70 WASH. L. REV. 833, 857 (1995) ("Typically, Japanese corporations have not sought to aggressively enforce their patents. This failure to enforce their patents may be because of a cultural predisposition to harmony, but it also may be because most Japanese companies were playing 'catch up' and had more incentive to borrow new technology from others than to try to protect their own.").

108. *See* Ronald J. Mann, *Commercializing Open Source Software: Do Property Rights Still Matter?*, 20 HARV. J.L. & TECH. 1, 29–30 (2006) (discussing the pledges and their limitations).

109. *See* Stuart J.H. Graham et al., *High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey*, 24 BERKELEY TECH. L.J. 1255, 1310 (2009) ("[S]tudies show that even in the large firm surveys, relatively smaller firms tend to report a significantly higher sensitivity to the costs of filing and enforcing patents."); Jean O. Lanjouw & Mark Schankerman, *Protecting Intellectual Property Rights: Are Small Firms Handicapped?*, 47 J.L. & ECON. 45, 45–46 (2004) ("The perception is that litigation is becoming increasingly difficult to avoid, which pushes up patent enforcement costs and makes it especially difficult for small firms to protect their intellectual property.").

110. *See* Ronald J. Mann, *Do Patents Facilitate Financing in the Software Industry?*, 83 TEX. L. REV. 961, 981 (2005) ("[E]ven if an early-stage company had a patent, it is unlikely that it would have resources available to enforce the patent through litigation against a competitor. That is particularly true when the competitor is a large firm."). If they cannot afford attorneys' hourly rates, individual patentees

handicapped by an inability to spread litigation costs over a large number of valuable patents.[111] Moreover, small firms may also have a more difficult time enforcing their patent rights through extrajudicial resolution because they are not repeat players with large patent portfolios ripe for cross-licensing.[112] However, some evidence suggests that "individual inventors and small companies are much more likely to enforce their patents."[113]

It may be imprudent to make sweeping generalizations about patent enforcement because enforcement patterns also vary by industry.[114] For every theory of patent enforcement, there are counterexamples and competing hypotheses with their own empirical—or anecdotal—support. That said, the evidence points to one overarching truth: Not all patentholders behave similarly.[115] Some enforce; others do not. Thus, Judge Posner's primary premise of the nonpatentability element—that antitrust law should be indifferent as to who holds a particular patent because all patentees will enforce that patent in precisely the same way—is demonstrably false.

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may only be able to sue when the expected damages and perceived probability of winning are sufficiently high to convince a contingency-fee litigator to take the case. *See* Robert P. Greenspoon & Catherine M. Cottle, *Don't Assume a Can Opener: Confronting Patent Economic Theories with Licensing and Enforcement Reality*, 12 COLUM. SCI. & TECH. L. REV. 194, 213 (2011). The financial asymmetries in infringement litigation may cause smaller firms to avoid entire areas of innovation in which large firms possess patents. *See* ADAM B. JAFFE & JOSH LERNER, INNOVATION AND ITS DISCONTENTS: HOW OUR BROKEN PATENT SYSTEM IS ENDANGERING INNOVATION AND PROGRESS, AND WHAT TO DO ABOUT IT 15 (2004).

111. *See* Erin Shinneman, Note, *Owning Global Knowledge: The Rise of Open Innovation and the Future of Patent Law*, 35 BROOK. J. INT'L L. 935, 957 (2010) ("Small firms may be at a particular disadvantage in terms of protecting their rights since they are not as well positioned to spread the cost of litigation over large numbers of patents."); *see also* Bessen & Meurer, *supra* note 98, at 178 ("Big firms can spread the fixed cost of monitoring for infringement over a larger number of patents.").

112. *See* Michael J. Meurer, *Inventors, Entrepreneurs, and Intellectual Property Law*, 45 HOUS. L. REV. 1201, 1236–37 (2008) ("Patents are not a great source of value to the average small firm because small firms have trouble enforcing, selling, and licensing their patents."); Paul J. LaVanway, Jr., Note, *Patent Licensing and Discretion: Reevaluating the Discretionary Prong of Declaratory Judgment Jurisdiction After* MedImmune, 92 MINN. L. REV. 1966, 1997 (2008) ("'[S]mall firms avoid R&D areas where the threat of litigation from larger firms is high.' Moreover, because both trading patents and repeated interactions in the marketplace are important for patent dispute resolution, individual inventors and small firms are handicapped at enforcing their intellectual property rights through extrajudicial resolution." (footnote omitted)); *see also* Lanjouw & Schankerman, *supra* note 109, at 47.

113. DAN L. BURK & MARK A. LEMLEY, THE PATENT CRISIS AND HOW THE COURTS CAN SOLVE IT 56 (2009).

114. *See id.* For example, software and Internet firms appear less likely to patent their innovation and to enforce the patents that they do hold. *See* Graham et al., *supra* note 109, at 1313 ("Patenting and enforcement costs are cited much more frequently by software and Internet firms as motives for not patenting, a finding that is consistent with the lower significance . . . that software firms ascribe to patents as a means of securing competitive advantage."). In contrast, companies in the pharmaceutical and biotechnology sector more aggressively enforce their patents. *See* Jay P. Kesan & Andres A. Gallo, *The Political Economy of the Patent System*, 87 N.C. L. REV. 1341, 1370 (2009) ("Big companies in the pharmaceutical and biotechnology sector, as well as small companies in both sectors, prefer strong enforcement of their patents.").

115. *See* Ted Sichelman & Stuart J.H. Graham, *Patenting by Entrepreneurs: An Empirical Study*, 17 MICH. TELECOMM. & TECH. L. REV. 111, 158–61 (2010).

2. Regulatory or Institutional Constraints

If a government-affiliated actor acquires a patent, then she may not be able to increase prices in the same manner that a private patentee could. An inventor's acceptance of government funding may limit her ability to patent or otherwise exercise the full exclusionary power of a patent. In the post-World War II era, the federal government has become a major funder of R&D projects, but these funds come with strings attached.[116] As Suzanne Scotchmer has explained, "Although norms vary from discipline to discipline, private firms usually impose more restrictions on how the research outputs are used than government agencies do."[117] For example, participation in the government-funded human genome project obligates researchers to put their discoveries in the public domain.[118] Commercialization at monopoly prices cannot occur when researchers are obligated to provide free access.[119] If a patent thief were not similarly bound by these government restrictions, the thief could charge a higher price than could the true inventor.

Litigation between FilmTec and Hydranautics illustrates the point.[120] John Cadotte worked for a not-for-profit research corporation on a government-funded water desalinization project that used reverse osmosis membranes. Cadotte left to form a for-profit corporation (FilmTec) to commercially manufacture such membranes. Cadotte filed for a patent on his membrane and assigned the patent rights to FilmTec. When FilmTec enforced its patent by suing Hydranautics for infringement, Hydranautics argued that FilmTec's title to the patent was defective because it was based on government-funded research. Reversing a district court opinion, the Federal Circuit held that the patent rightfully belonged to the U.S. government, not FilmTec.[121] Meanwhile in parallel litigation, Hydranautics brought an antitrust lawsuit against FilmTec for illegally monopolizing the market for reverse osmosis membranes by bringing sham litigation to enforce a fraudulently obtained patent.[122] Through the vagaries of civil procedure rules regarding compulsory counterclaims, both the

116. *See* SCOTCHMER, *supra* note 104, at 240 ("Innovations that originate with government funding are made available to users under two sets of rules, which operate rather differently. We will call the two sets of rules the *commercialization model* and the *free-access model*.").

117. *Id.* at 237.

118. *See id.* at 1 ("Some government funding, such as that for the human genome project, carries an obligation to put the resulting knowledge in the public domain (available for free access). The output of other government funding can be patented.").

119. *See* Peter S. Arno & Michael H. Davis, *Why Don't We Enforce Existing Drug Price Controls? The Unrecognized and Unenforced Reasonable Pricing Requirements Imposed upon Patents Deriving in Whole or in Part from Federally Funded Research*, 75 TUL. L. REV. 631, 658–59 (2001) (advocating that patented inventions based on federally funded research must be sold at reasonable prices).

120. *See* FilmTec Corp. v. Hydranautics, 67 F.3d 931, 933 (Fed. Cir. 1995).

121. *See id.* at 934 ("We held, for reasons related to Cadotte's employment at the time the invention was conceived and in light of governing federal statute, that title to the invention was and always had been in the United States, and that FilmTec was without standing to sue on the '344 patent.").

122. *See* Hydranautics v. FilmTec Corp., 70 F.3d 533, 534 (9th Cir. 1995).

Federal and Ninth Circuits[123] issued opinions—in conflict—about whether Hydranautics' antitrust claim could proceed.[124] Neither court addressed the issue as one of monopolization through patent theft—perhaps because under the *Brunswick* rule, the underlying discovery was patentable, though the patent should have issued to the U.S. government. Yet, the facts of the litigation underscore the principle that securing a monopoly through patent theft can distort markets when a patent applicant lies to the Patent Office in order to have a patent issued to a private party instead of a government entity.

University research departments are major recipients of government funding. As federal research funds expanded after World War II, universities became less dependent on industry funding. Federal law initially restricted the ability of government-funded universities and their researchers to patent their inventions, but the Bayh–Dole Act of 1980 permitted it.[125] Many universities have established licensing offices that collect royalties.[126] Yet even when they do patent, universities may not enforce their patent rights as aggressively as private firms do. Many universities do enforce their patent rights,[127] particularly against commercial infringers.[128] Many other universities, however, "choose not to pursue infringers, leading some commentators to opine that 'universities are widely considered meek when it comes to enforcing their patents.'"[129] Such reticence may be a product of the legal, financial, and reputational risks attendant to aggressive patent enforcement.[130] Low-enforcement universities may fear that a rigid view of IP rights could hamper collaboration and the advancement of knowledge.[131] Thus, despite Judge Posner's assertion that all patentees would charge royalties that maximize profits, research has shown that "most university licensing offices do not explicitly seek to maximize profits."[132]

123. *Compare id.*, *with FilmTec Corp.*, 67 F.3d at 933–34.

124. *See* CHRISTOPHER R. LESLIE, ANTITRUST LAW AND INTELLECTUAL PROPERTY RIGHTS: CASES AND MATERIALS 120–23 (2011) (discussing the competing *FilmTec* opinions).

125. *See* SCOTCHMER, *supra* note 104, at 235.

126. *See id.*

127. *See* Christopher Larus, John K. Harting & Sharon Roberg-Perez, *Patent Licensing and Assignment with an Eye Toward Enforcement: Tips for University Patent Owners*, LES NOUVELLES, Mar. 2013, at 13, 13; Peter Lee, *Contracting to Preserve Open Science: Consideration-Based Regulation in Patent Law*, 58 EMORY L.J. 889, 942 (2009); Elizabeth A. Rowe, *The Experimental Use Exception to Patent Infringement: Do Universities Deserve Special Treatment?*, 57 HASTINGS L.J. 921, 936 (2006); *see also* Katherine J. Strandburg, *Users as Innovators: Implications for Patent Doctrine*, 79 U. COLO. L. REV. 467, 477 (2008) (noting increased patenting by universities).

128. *See* Christopher M. Holman, *Learning from Litigation: What Can Lawsuits Teach Us About the Role of Human Gene Patents in Research and Innovation?*, 18 KAN. J.L. & PUB. POL'Y 215, 260 (2009).

129. Jacob H. Rooksby, *University Involvement in Patent Infringement Litigation*, LES NOUVELLES, Mar. 2012, at 8, 13 (quoting Marie Powers, *Patent Litigation: Sometimes It's a Risk Worth Taking*, TECH. TRANSFER TACTICS, Mar. 2011, ¶ 1).

130. *See id.* at 10–12.

131. *See* Kesan & Gallo, *supra* note 114, at 1368 ("While universities would like their property rights enforced, they may not like strict property rights that do not allow collaboration or the use of previous inventions to advance knowledge and research.").

132. SCOTCHMER, *supra* note 104, at 236.

They instead balance the desire for royalties with the goal of disseminating information and encouraging its use.

Patent theft can increase prices when the patent is stolen from university researchers. For example, in the 1980s, two doctors at the University of Colorado had conducted research studies on how the bodies of pregnant women absorb the nutrients from vitamins. Their research demonstrated that by reducing the quantities of oxides and carbonates of calcium and magnesium in vitamins, pregnant women could better absorb the iron in prenatal vitamins. Throughout their research they had been in communication with a researcher from pharmaceutical company American Cyanamid, Dr. Leon Ellenbogen. The university doctors wrote an article reflecting their findings and submitted it to the *New England Journal of Medicine*. They sent a draft of the article to Dr. Ellenbogen, who took the university researchers' draft and converted it into a patent application. He copied, without change, the graphs from the as-yet-unpublished academic article. American Cyanamid filed the patent application, listing Dr. Ellenbogen as the sole inventor. The PTO issued a patent to American Cyanamid, which enforced its patent, including bringing infringement suits against at least six generic vitamin manufacturers.[133] The university doctors had never intended to patent their work, instead opting to publish their findings widely.[134] The University was not interested in maximizing profits.[135]

This act of patent theft distorted the market for years; American Cyanamid and Dr. Ellenbogen affirmatively concealed their stolen patent from the university doctors, who did not discover the patent theft until a decade later. The two doctors at the University of Colorado had to go through a trial, and it took over two decades after the theft for the case to be resolved in the doctors' favor.[136] During those twenty years, consumers paid more than they would have but for American Cyanamid's monopolization through patent theft.[137] The American

133. *See* Univ. of Colo. Found., Inc. v. Am. Cyanamid Co., 342 F.3d 1298, 1301–03 (Fed. Cir. 2003).

134. *See* Univ. of Colo. Found., Inc. v. Am. Cyanamid Co., 153 F. Supp. 2d 1231, 1242 (D. Colo. 2001).

135. *See id.* ("The gravamen of this case is that the Doctors never viewed the reformulation idea as a financial opportunity and neither they, nor the University by virtue of the University Patent Policy, ever intended to or would have sold exclusivity rights to the idea to Cyanamid in 1981."). Inventors care about more than money. For example:

> [S]cientists who made a significant breakthrough with the hypothalamus gland emphasized their labor as a key aspect of their work: "Nobody before had to process millions of hypothalami. . . . The key factor is not the money, it's the will . . . the brutal force of putting in 60 hours a week for a year."

Jeanne C. Fromer, *Expressive Incentives in Intellectual Property*, 98 VA. L. REV. 1745, 1776 (2012) (quoting BRUNO LATOUR & STEVE WOOLGAR, LABORATORY LIFE 118 (1986)).

136. *See id.*, *Univ. of Colo. Found.*, 153 F. Supp. 2d at 1245.

137. By using the stolen patent to exclude competitors from the market, the patent thieves were able to charge a monopoly price because potential rivals could not price discipline American Cyanamid due

Cyanamid patent theft episode illustrates that while patent thieves may be motivated by profit, the actual innovators may not be.[138]

The complexity of the rules associated with government funding need not be mastered in order to appreciate the basic principle that the presence of federal funding may affect the market power associated with a particular patent. The nonpatentability element makes no allowance for the possibility that the patent should have issued to a government-sponsored inventor who would be obligated to dedicate the patent to the public domain or at least not charge a monopoly price after it received a patent. And if a patentee were to steal an invention from a university laboratory, the profit-maximizing thief would probably exercise the patent rights differently—more aggressively, with higher royalties—than would the true inventor if she instead had been awarded that same patent.

3. Contractual Constraints

A patent thief may also be able to charge a higher price than the true inventor if the latter has contractually committed to not charge monopoly prices for her intellectual property. When members of a standard-setting organization (SSO) are choosing a standard to be adopted for a particular technological device, they worry about the problem of patent holdup. Patent holdup occurs when a patent owner waits until the patent is incorporated into a widely adopted standard, then announces that all users of that standard are infringing on the patent and demands an exorbitant royalty.

In order to guard against the threat of patent holdup, many SSOs impose two requirements on their members. First, all members must disclose their intellectual property rights in a timely manner so that decisionmakers can know whether they are adopting a standard that incorporates an existing—or soon-to-issue—patent.[139] If a patent thief either does not belong to the relevant SSO or conceals its wrongful possession of a relevant patent, then it may engage in holdup.

Second, members of an SSO must agree that if their patent is incorporated into a standard, the royalty that they charge will be fair, reasonable, and nondiscriminatory (FRAND). Each FRAND commitment can be thought of as a contractual obligation, an enforceable promise not to charge a monopoly price.

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to the threat of an infringement suit. *See* Leslie, *supra* note 37, at 113–39 (noting that even a weak patent can exclude competitors and allow the patentee to charge a supracompetitive price).

138. *See, e.g.*, *Univ. of Colo. Found.*, 153 F. Supp. 2d at 1242 ("Cyanamid's actions were motivated by greed and a desire for the greater profits anticipated by the securing of exclusive, rather than general, rights to the technology, in direct contravention of what the Doctors wanted and intended.").

139. The FTC has held that a patentholder can violate antitrust laws if it misrepresents to a standard-setting organization that it does not own patent rights when it does and then seeks to enforce those patent rights after they have been incorporated into an adopted standard. *See In re* Dell Computer Corp., 121 F.T.C. 616, 618 (1996) (applying Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45 (2012)).

Refusal to honor a FRAND commitment can constitute a breach of contract.[140] For example, the Third Circuit has held that FRAND commitments are binding and that a monopolist's refusal to honor its FRAND commitments after its patented technology has been incorporated into an adopted standard in reliance on those commitments can constitute monopoly conduct for Section 2 liability.[141]

If the true inventor is constrained by a FRAND commitment, but the patent thief is not, the awarding of the patent to the wrong monopolist can have important anticompetitive implications. The patent thief can engage in patent holdup, demanding an extortionate royalty that results in higher prices for goods based on the adopted standard. Putting a patent in the hands of a firm that is not constrained by a contractual FRAND commitment can raise the royalty rate considerably.[142] If the true innovator is encumbered by FRAND commitments, consumers are far better off if the actual innovator secures the patent because she cannot charge the monopoly price after the standard becomes entrenched.

4. Reputational Constraints

Judge Posner assumed that every firm sets a price that maximizes its profits on each sale, but firms are sometimes constrained by political or public relations considerations. Some patentees will not be able to charge a monopoly price because of these reputational constraints. For example, firms generally do not price gouge during emergencies. In the context of patents, one pharmaceutical company may not be able to charge a monopoly price for a patented product because of the public's ability to respond by boycotting the company's other products.

The facts underlying a recent merger case (not involving patent theft) help illustrate this principle. There are two drugs to treat patent ductus arteriosus (PDA), a life-threatening heart condition that every year affects tens of thousands of low-birth-weight, usually premature, babies.[143] Two drugs could treat the condition: Indocin IV and NeoProfen. The pharmaceutical giant Merck owned the rights to Indocin IV and charged $77.77 per treatment. Lundbeck, Inc., another pharmaceutical company, acquired Indocin IV from Merck and raised the price. A year later, Lundbeck acquired the contingent U.S. rights to NeoProfen, which had not yet been approved by the FDA to treat PDA, from

140. *See* Microsoft Corp. v. Motorola, Inc., No. C10-1823JLR, 2013 WL 2111217, at *1–2 (W.D. Wash. Apr. 25, 2013); Research In Motion Ltd. v. Motorola, Inc., 644 F. Supp. 2d 788, 790–91 (N.D. Tex. 2008).

141. *See* Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297, 314 (3d Cir. 2007); *see also* Michael A. Carrier, *Patent Assertion Entities: Six Actions the Antitrust Agencies Can Take*, CPI ANTITRUST CHRON., Jan. 2013, at 2, 5, *available at* http://ssrn.com/abstract=2209521 (discussing example of attempted evasion of FRAND commitment).

142. *See In re* Negotiated Data Solutions LLC, FILE 051-0094, 2008 WL 258308, at *38 (F.T.C. Jan. 22, 2008).

143. *See* FTC v. Lundbeck, Inc., 650 F.3d 1236, 1238 (8th Cir. 2011).

Abbott Laboratories.[144] A mere two days after it acquired the rights to NeoProfen, Lundbeck raised the price of Indocin IV by almost 1300% to over $1,500.[145] The different pricing behavior of the two pharmaceutical companies shows the importance of who owns a particular patent. Basic economic theory would suggest that Merck could have raised the price considerably in order to maximize its profits on Indocin IV. But Merck was constrained by public relations concerns. Writing a concurrence in an earlier case not involving Lundbeck, FTC Commissioner J. Thomas Rosch explained that

> Merck had a large product portfolio that included a number of pharmaceutical products that were more profitable than Indocin. It is arguable that if it sold at a monopoly price a product used to treat premature babies, that could damage its reputation and its sales of those more profitable products.[146]

Lundbeck was not similarly constrained. It purchased the rights to Indocin IV from Merck and eventually raised the price thirteen-fold, ultimately settling on a price of $1,614 per treatment, more than it was charging for NeoProfen.[147]

Although the case involves a voluntary sale of a patent, not patent theft, the facts of the case illustrate the point that who owns a patent can have important consequences for the price of the patented product. Consider a hypothetical: suppose that Lundbeck had a patent on NeoProfen and Merck was developing Indocin IV but had not yet patented it. Under this scenario, if Lundbeck had committed fraud on the PTO by misappropriating Merck's data and misrepresenting itself as the inventor of Indocin IV, it would acquire the patent for Indocin IV and charge a price of $1,600 per treatment. Under the *Brunswick* rule, even if Lundbeck had monopolized a relevant product market, it would have committed no antitrust wrong because consumers are allegedly indifferent to this patent theft. The actual market data from the merger case, however, shows that consumers were absolutely worse off if Lundbeck controlled the patent instead of Merck. If Lundbeck had acquired monopoly power through patent theft, it is wrong to suggest, as *Brunswick* holds, that antitrust law must stand down because consumers are unaffected.

C. PATENT THEFT DISTORTS INNOVATION

The conventional wisdom—that patent theft does not give rise to antitrust liability so long as the true inventor would be entitled to a patent—also fails

144. *See* FTC v. Lundbeck, Inc., Civil Nos. 08-6379 (JNE/JJG), 08-6381 (JNE/JJG), 2010 WL 3810015, at *1 (D. Minn. Aug. 31, 2010).

145. *Id.*; *Lundbeck*, 650 F.3d at 1238.

146. Concurring Statement of Commissioner J. Thomas Rosch, FTC v. Ovation Pharm., Inc., FTC (2011), *available at* http://www.ftc.gov/os/caselist/0810156/081216ovationroschstmt.pdf.

147. *Lundbeck*, 650 F.3d at 1238. The Eighth Circuit rejected the FTC's challenge to Lundbeck's acquisition of Indocin IV in an opinion that has proven controversial. *See* Christopher R. Leslie, *Antitrust Law as Public Interest Law*, 2 U.C. IRVINE L. REV. 885, 907–08 (2012).

to appreciate the distinction between static and dynamic competition. Judge Posner claimed that the nonpatentability requirement was appropriate "to preserve the health of the competitive process."[148] Yet he defined this goal narrowly to mean only "discourag[ing] practices that make it hard for consumers to buy at competitive prices."[149] This characterization confuses static and dynamic competition. Static competition focuses primarily on price; it emphasizes the importance of markets where multiple firms compete for sales by offering consumers a lower price. Dynamic competition, in contrast, focuses on improving products or supplanting product categories altogether, as when CD players replaced record players.[150] The competitive process includes facilitating both lower prices and better products.[151] Judge Posner's analysis focused solely on static competition, namely short-term price. His reasoning ignored dynamic competition considerations, including the need to reward true inventors in order to facilitate investments in R&D. The prospect of financial rewards is what motivates firms and people to engage in research and development. If a firm is denied protection for its ideas, then it has a diminished incentive to innovate.

Patents help ensure that inventors can recoup their investment in innovation. The patent system provides the foundation of America's innovation regime. Patents are often necessary to spur innovation in a competitive marketplace because R&D efforts entail large upfront costs. If innovators could not exclude rivals, at least temporarily, then innovative firms would not be able to recoup these costs because competitors without research costs could underprice innovators.[152] One reason that firms invest in R&D is the probability of securing a valuable patent that allows the inventor to charge a supracompetitive price, providing for recoupment and eventually a stream of monopoly profits.[153] If a firm predicts—or fears—that it will not recoup its total investment in innovation, it will invest less—and perhaps nothing—on research.[154] The profits from a successful patented product must be sufficiently

148. Brunswick Corp. v. Riegel Textile Corp., 752 F.2d 261, 266 (7th Cir. 1984).

149. *Id.*

150. *See* LESLIE, *supra* note 124, at 23–24. On the distinction between static and dynamic efficiency, see Thomas O. Barnett, Assistant Attorney Gen., Antitrust Div., U.S. Dep't of Justice, Presentation to the George Mason University School of Law Symposium: Interoperability Between Antitrust and Intellectual Property (Sept. 13, 2006), *available at* http://www.usdoj.gov/atr/public/speeches/218316.htm#N_3_.

151. *See* Data Gen. Corp. v. Grumman Sys. Support Corp., 36 F.3d 1147, 1182 (1st Cir. 1994), *abrogated by* Reed Elsevier, Inc. v. Muchnick, 559 U.S. 154 (2010).

152. *See* Gideon Parchomovsky & Peter Siegelman, *Towards an Integrated Theory of Intellectual Property*, 88 VA. L. REV. 1455, 1466–67 (2002).

153. *See* Christopher A. Cotropia, *Modernizing Patent Law's Inequitable Conduct Doctrine*, 24 BERKELEY TECH. L.J. 723, 761 (2009) ("Patent protection incentivizes invention because it gives the inventor an ability to recoup her research and development costs. Patents do this by giving the patent holder the ability to exclude competitors and control price." (footnote omitted)).

154. *See* Parchomovsky & Siegelman, *supra* note 152, at 1467 ("Unauthorized reproduction would drive down the market price to the cost of copying, original authors and inventors would not be able to

high to recoup the R&D expenditures in that particular product, as well as all of the research projects that failed to generate marketable products. Otherwise, the firm's overall R&D program operates at a net loss and should be scaled back or eliminated.

Patent theft may prevent innovators from recouping their investments in R&D. If inventions can be stolen and patented by others, the incentive to conduct research in the first place is diminished.[155] The inventor has not simply been robbed of its patent; it has been robbed of the temporary stream of monopoly profits. Surprisingly, Judge Posner in his *Brunswick* opinion seemingly sang the praises of patent theft, arguing that

> if anything, competitive pricing is more likely if Brunswick loses this suit than if it wins it. If Brunswick is confident that Riegel's patent is invalid, it can go into the antistatic-yarn business itself, with little fear of being held liable for patent infringement; and by entering, it will inject some competition into that market for the first time.[156]

But this analysis fails to recognize that even if patent theft increases competition in the short-term,[157] it does so by preventing recoupment by the true innovator and thus reduces the incentive to innovate. If the rightful patentee knows that its patent can be stolen and that it will not recoup its research or other fixed costs, then it will be less likely to undertake these expenses in the first place, even though they increase social wealth.

Patent theft, however, has worse consequences for innovators than just not being able to charge a monopoly price because patent theft can prevent the inventor from practicing its own innovation. The rival's possession of a stolen patent acts as a barrier to entry against the true innovator. In the aftermath of patent theft, the innovator is worse off having engaged in research than if it had not invested in innovation. As an initial matter, the innovator is out the money, time, and other resources that were invested but will not be recouped if the innovator does not obtain a patent in its own name. Additionally, the innovator is at risk of "infringing" a patent on its own invention. It may have to pay

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recover their expenditures on authorship and R&D, and, as a result, too few inventions . . . would be created.").

155. *See* WARD S. BOWMAN, JR., PATENT AND ANTITRUST LAW: A LEGAL AND ECONOMIC APPRAISAL 33 (1973) ("The principal justification for patents . . . is the need to foreclose rapid copying by others. Thus, a patent system is a corrective for underinvestment in innovation."); *see also* BESSEN & MEURER, *supra* note 98, at 163 ("Poor prior art search necessitates that some patents will be awarded to someone other than the actual first inventor; this can cause problems for the true innovators.").

156. Brunswick Corp. v. Riegel Textile Corp., 752 F.2d 261, 267 (7th Cir. 1984). It is also the case that if an innovation bandit steals an inventor's idea and sells it or makes public use of it, the true inventor may be prevented from patenting his own idea if the thief's activities occur more than one year before the inventor files its patent application. *See* Evans Cooling Sys., Inc. v. Gen. Motors Corp., 125 F.3d 1448, 1449 (Fed. Cir. 1997). As such, as Posner argues, patent theft may seem to benefit consumers in the short run.

157. This seems unlikely because patent theft may exclude the actual innovator from the market.

royalties to manufacture the product that it invented; alternatively, it may be excluded from the market altogether if the patent thief refuses to license the stolen invention.

The *Brunswick* rule fails to appreciate how patent theft can exclude the true innovator from the market. In response to Brunswick's argument that the alleged patent theft by Riegel deprived Brunswick of the ability to license other manufacturers to produce the antistatic yarn that it invented because licensees would fear an infringement suit by Riegel, Judge Posner said that Brunswick could easily solve the problem by simply indemnifying the licensees.[158] His assertion is unpersuasive for several reasons. First, why would anyone pay Brunswick for a license when Brunswick does not have a patent and another firm does? Licensees would license from Riegel, not Brunswick, because Riegel could still sue for infringement while Brunswick could not. Second, indemnification is not free. It costs time and money to negotiate an indemnification clause,[159] and Brunswick would likely pay higher insurance premiums to undertake the risk of litigation. Third, indemnification does not solve the problem for licensees who do not wish to be dragged into court and have their time and energy absorbed in drawn-out patent litigation even if Brunswick ultimately pays any damages. Finally, it is unclear whether indemnification is as easy as the *Brunswick* opinion suggests. Judge Posner betrayed a weakness in his argument by noting that "Brunswick, a large corporation, can afford to indemnify its licensees," which implicitly conceded that the smaller firm that has had its patent stolen may be unable to indemnify licensees.[160]

The theft of the patent raises the true inventor's costs. The rightful owner of the patent is not merely being denied a stream of monopoly profits that it could earn. It may incur litigation costs either in a suit to challenge the patent theft or as a defendant in an infringement suit brought against it by the patent thief. The litigation costs associated with such patent litigation can be very high.[161] The true innovator also runs the risk of the court or jury reaching the wrong result.[162] Thus, even though the rightful patentholder knows that the monopo-

158. *See Brunswick*, 752 F.2d at 267–68.

159. *See* Eastman Kodak Co. v. Goodyear Tire & Rubber Co., 114 F.3d 1547, 1557 (Fed. Cir. 1997), *abrogated by* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448 (Fed. Cir. 1998).

160. *Brunswick*, 752 F.2d at 268; *see also* Ritchie, *supra* note 4 (noting how alleged inventor of product could not license her invention because potential licensees feared litigation from larger firm that allegedly engaged in patent theft).

161. Patent litigation typically costs millions of dollars. *See* AM. INTELLECTUAL PROP. LAW ASS'N, REPORT OF THE ECONOMIC SURVEY 35 (2011). These litigation costs are recoverable in antitrust litigation, but not other forms of legal redress that the actual innovator might consider, such as a breach of contract suit. *See infra* section IV.B.

162. *See* Leslie, *supra* note 37, at 135–36 (noting that juries are generally pro-patentholder); Kimberly A. Moore, *Judges, Juries, and Patent Cases—An Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365, 386 (2000) (same).

list's patent is invalid, that patent nevertheless creates a barrier to entry by raising the true inventor's costs. Patent theft may also hamper innovation by forcing the diversion of the actual inventor's research budget. After having its patent stolen, the true innovator's fear of infringing the stolen patent may force it to engage in costly attempts to design around the patent that is illegitimately held by its rival. The design-around process can prove to be expensive, wasteful, and ultimately futile depending on the scope of the patent.[163] Despite the possibility of design-around activity in some markets, in many industries, such as biotechnology and software, a monopolist's possession of a patent with suspect validity "may lead its competitor to forgo R&D in the areas that the patent improperly covers."[164] The *Brunswick* opinion, however, overlooks the exclusionary effects of the stolen patent on the firm that should have received the patent.

Patent theft also distorts patent races. A patent race refers to the competition between firms in an industry to make research breakthroughs and patent them before their rivals do. The FTC has recognized that "competition to win a patent right may drive a race to innovate."[165] Patent races get products to market sooner.[166] Although the issuance of the patent may lead to higher prices over the life of the patent (or until a noninfringing substitute enters the market), the race for the patent leads to the development of better products, one of the basic goals of competition. Races have costs—such as encouraging duplicative research, which could be deemed wasteful—but on balance "such competition generates better consumer products and lower prices, benefits that may outstrip any social loss from the patent race, some observe."[167]

Patent theft undermines the dynamic of innovation-encouraging patent races. When firms know that they are competing for the patent, they calculate the probability and value of winning the patent race against the expected costs of competing in it.[168] If the race to the Patent Office does not have fair rules that are properly enforced, innovative firms will have less incentive to participate in that competition. Inventors may have insufficient incentive to invest in innovation if their ideas can be stolen and the inventor is subsequently excluded from the market for a product that it alone developed.

Patent theft also distorts innovation by diverting research funds away from innovative entities. The true inventor may be more likely to reinvest any

163. *See* Christopher R. Leslie, *Antitrust and Patent Law as Component Parts of Innovation Policy*, 34 J. CORP. L. 1259, 1271–72 (2009); *see also* BESSEN & MEURER, *supra* note 98, at 47.

164. FTC, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY 5–6 (2003) [hereinafter FTC INNOVATION REPORT].

165. *Id.* ch. 2, at 2.

166. *See id.* ch. 2, at 21; *see also* John F. Duffy, *Rethinking the Prospect Theory of Patents*, 71 U. CHI. L. REV. 439, 467 (2004) (noting that patent races will result in patents expiring sooner).

167. FTC INNOVATION REPORT, *supra* note 164, ch. 2, at 16.

168. *See* BOWMAN, *supra* note 155, at 22–23; *see also* BESSEN & MEURER, *supra* note 98, at 250 (explaining the economics of winner-takes-all patent races).

monopoly profits in R&D.[169] For example, universities reinvest much of their royalties into more innovation and research. The true innovator may also be more likely to improve upon the original patent because it would not be subject to a blocking patent. If its original patent was stolen, the true inventor may be less likely to research improvement patents. Patent theft may make it harder for true inventors to secure funding.[170] In short, who receives the monopoly profits from the patent can affect the stream of future innovation.

Even if the patent thief is otherwise an innovative firm, the prospect of stealing a rival's invention also reduces the thief's incentive to innovate. In some cases, the firm that steals a patent may be the firm that but for that theft is most likely to develop a substitute for that patent. For example, in the *Brunswick* case, Riegel was far more likely to design around the patent for antistatic yarn and develop a noninfringing substitute than was Brunswick. Brunswick never intended to manufacture the antistatic yarn, but merely to license it.[171] If the patent had been awarded to Brunswick in the first place, Riegel—as the manufacturer of specialized yarn—would have a relatively powerful incentive to develop a competing product. If Riegel acquired Brunswick's patent through theft, Riegel no longer had a strong incentive to develop a noninfringing substitute. In this scenario, patent theft had the effect of reducing the net amount of research and innovation in the relevant market.

Finally, patent theft hampers innovation when the true inventor would rather share its discovery with the world. The fear of patent theft could deter scientists from utilizing the peer review process at prestigious journals.[172] The patent theft in the *American Cyanamid* case thwarted the doctors' desire to share their invention with the market.[173] Patent theft deprives the true innovator of its right to not patent its innovation, to not exclude others from benefiting from it, and to encourage others to experiment with and improve upon a foundational insight.[174]

In sum, patent theft reduces both competition and consumer welfare. The competition for patents forms a critical part of innovation policy in America. Consumers suffer a loss of welfare in the long run if innovators invest less in

169. *See* Timothy R. Holbrook, *Equivalency and Patent Law's Possession Paradox*, 23 HARV. J.L. & TECH. 1, 39–40 (2009) (noting incentives of the original innovator to continue to improve its invention in light of the patent doctrine of equivalents).

170. *See* Richard Allen, *Guarding Those Winning Ideas*, BUS. REV. WKLY., July 2, 1993, *available at* 1993 WLNR 5510035.

171. *See* Brunswick Corp. v. Riegel Textile Corp., 752 F.2d 261, 267 (7th Cir. 1984) (noting that Brunswick was not a textile manufacturer).

172. *See* Kathleen Day, *Patents and Peer Pressures; Two Firms' Legal Fight May Shake a Mainstay of Scientific Research*, WASH. POST, Apr. 19, 1996, *available at* 1996 WLNR 6569918.

173. *See* Univ. of Colo. Found., Inc. v. Am. Cyanamid Co., 153 F. Supp. 2d 1231, 1242 (D. Colo. 2001).

174. *See id.* at 1245 (Patent theft "betrayed the Doctors and deprived both them and the University of their prerogative *not* to patent the Doctors' invention or to exclude others from benefitting from it.").

the research and production of new goods because the possibility of patent theft reduces the expected benefits of their activities.

D. PATENT THEFT CREATES INEFFICIENCY

Antitrust law cares about efficiency. Indeed, in his academic writing, Judge Posner has argued "the only goal of antitrust law should be to promote efficiency in the economic sense."[175] So it is particularly surprising that in holding that antitrust law is indifferent to patent theft, Judge Posner neglected to discuss the efficiency implications of patent theft. Yet patent theft can make markets less efficient in several ways. This section considers three.

1. Patent Theft and Patent Suppression

Patent theft can create inefficiency if the thief decides not to practice the patent. Early American patent law required patentholders to use their patents. For example, one district court judge in 1886 held that a patentee "is bound either to use the patent himself or allow others to use it on reasonable or equitable terms."[176] In 1858, the Supreme Court opined that the patent grant "was never designed for [an inventor's] exclusive profit or advantage."[177] The Court later changed course and held that patentees could suppress their inventions[178] because the patent owner "has no obligation either to use it or to grant its use to others."[179] As the law stands, a patentholder is legally entitled to suppress its patent, neither manufacturing patented products nor licensing others to use the patent.[180]

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175. RICHARD A. POSNER, ANTITRUST LAW 2 (2d ed. 2001).

176. Hoe v. Knap, 27 F. 204, 212 (C.C.N.D. Ill. 1886). In this case, the court refused to grant an injunction against a user of a patented printing press because the patentee was not using his invention commercially. *See id.* Early patent law cared about who acquired the patent and treated domestic and foreign patent holders differently. For example, pursuant to a 1832 federal statute, aliens who held U.S. patents were required to make public use of their patent within one year of issuance or the patent would be void. *See* Cont'l Paper Bag Co. v. E. Paper Bag Co., 210 U.S. 405, 429 (1908) ("A violation of the law rendered the patent void. The act was repealed in 1836.").

177. Kendall v. Winsor, 62 U.S. (21 How.) 322, 327–28 (1858).

178. The Court explained in *Continental Paper Bag Co.*:

> As to the suggestion that competitors were excluded from the use of the new patent, we answer that such exclusion may be said to have been of the very essence of the right conferred by the patent, as it is the privilege of any owner of property to use or not use it, without question of motive.

210 U.S. at 429.

179. Hartford-Empire Co. v. United States, 323 U.S. 386, 432 (1945).

180. *See* Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1547 (Fed. Cir. 1995) ("A patent is granted in exchange for a patentee's disclosure of an invention, not for the patentee's use of the invention. There is no requirement in this country that a patentee make, use, or sell its patented invention."). In the Patent Misuse Reform Act of 1988, Congress amended the patent statute to read: "No patent owner otherwise entitled to relief for infringement or contributory infringement of a patent shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having . . . refused to license or use any rights to the patent . . . ." 35 U.S.C. § 271(d) (2012).

Despite its legality, patent suppression is inconsistent with the patent system's "reasonable expectation that [the patentee] will either put his invention to practical use or permit others to avail themselves of it upon reasonable terms."[181] Justice Douglas observed in 1945 that suppressing patented inventions

> retard[s], rather than promote[s], the progress of the useful arts. . . . The use of a new patent is suppressed so as to preclude experimentation which might result in further invention by competitors. A whole technology is blocked off. The result is a clog to our economic machine and a barrier to an economy of abundance.[182]

Thus, although the patentee has the legal right to suppress the patent, the patent system was designed "to get new products into the marketplace during the period of exclusivity so that the public receives full benefits from the grant."[183]

A monopolist may want to steal a patent for a potentially competing product and then suppress that invention altogether in order to maintain its current monopoly position.[184] This would be the case if the monopolist controlled substitute patents and decided to practice one patent while suppressing the other, ensuring that no rival could use the second patented technology to make a competing product.[185] Professor Herbert Hovenkamp notes that

> nonuse of acquired IP rights can threaten competition, particularly when the acquired right is a substitute for the purchaser's current technology. Suppose a dominant firm is making widgets with process A and a different firm develops and patents a substitute process B, which is as good or better than A. Why would the first firm want to purchase an exclusive right to process B? Presumably, it might wish to change processes immediately, or employ both processes together. Then again, the firm may simply want to "shelve" process B so that others will not be able to use it. In the pure case—of the purchaser who intends never to use process B—the acquisition is a naked restraint. That is, the purchase does nothing to reduce the costs or enhance the output of the purchasing firm. The transaction is profitable only because of its success in suppressing the output of a rival.[186]

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181. E. Bement & Sons v. Nat'l Harrow Co., 186 U.S. 70, 90 (1902); *see also* Woodbridge v. United States, 263 U.S. 50, 55–56 (1923) ("Congress relies for the public benefit to be derived from the invention during the monopoly on the natural motive for gain in the patentee to exploit his invention and to make, use, and vend it or its product or to permit others to do so, for profit.").

182. Special Equip. Co. v. Coe, 324 U.S. 370, 382–83 (1945) (Douglas, J., dissenting) (footnote omitted) (citation omitted).

183. *Rite-Hite Corp.*, 56 F.3d at 1562.

184. *See supra* section III.A (discussing substitute patents).

185. *See* King Instruments Corp. v. Perego, 65 F.3d 941, 950–51 (Fed. Cir. 1995) (explaining the economics of patent suppression).

186. HERBERT HOVENKAMP, THE ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION 271 (2005) (emphasis omitted).

A patentholder who would practice or license the patent to others is strongly preferred over a patentholder who would suppress the patent. If a patent were stolen and then suppressed, this would generate inefficiency and harm consumers by denying them access to technological improvements.[187] Neither the patent system nor antitrust law condemns patent suppression per se. However, if a competitor engages in anticompetitive conduct in order to receive a patent that it suppresses—whereas the legitimate owner of the patent would have practiced the patent—then inefficiency is created because the patent went to the "wrong party." Even though patent suppression does not constitute patent misuse, an antitrust regime that cares about efficiency should condemn monopolization through patent theft coupled with suppression.

2. Efficient Innovators and Inefficient Thieves

Even assuming that both the true inventor and the patent thief may try to practice the patent, the former may be more efficient than the latter. If the true inventor is more efficient, then it may be more likely to get the product to market. Securing a patent is but one step on the road to commercializing an invention. Not every firm is equally equipped to convert a patented idea into an abundance of sellable products. It is reasonable to expect that in some cases the true inventor would have a better understanding of the product, its capabilities, and its limitations. As the firm that understands the technology more intimately, the true innovator may be in a better position to operationalize the patent.[188] The true patentholder may have resources or expertise that will help get the product to market quicker or more efficiently.[189]

Furthermore, in most cases, it would seem likely that the actual inventor understands the product, including production methods, better than a company that merely steals the inventor's research. The firm's cost structure and its access to capital may determine how much product the firm produces and at what price it markets the product. The legitimate inventor may be better able to translate the patent into a desirable product. No data exists on the relative

187. A leading treatise explains:

> Suppose the monopolist refuses to license its patents, or alternatively, pursues a policy of purchasing all the technology in its field; however, in most cases it simply "retires" the intellectual property rights at issue, not producing under them itself and refusing to license any others. In this way the monopolist denies others competitive access to its market, while perhaps not taking advantage of technological improvements that would benefit consumers.

HOVENKAMP, JANIS, LEMLEY & LESLIE, *supra* note 79, § 14.4.

188. Different firms have different cost structures. Holding a revenue curve constant, a monopolist with lower costs will produce a greater quantity at a lower price than a monopolist with higher costs.

189. This was not true for Brunswick, which licensed the technology that it claimed Riegel had stolen from it. *See* Brunswick Corp. v. Riegel Textile Corp., 752 F.2d 261, 267 (7th Cir. 1984) (noting that Brunswick was not a textile manufacturer).

efficiency of innovators versus patent thieves, and no claims are made here that patent thieves are necessarily less efficient. Nevertheless, the possibility remains that patent theft may exclude the more efficient producer from the market.[190] If so, antitrust principles are implicated when monopolization is achieved through patent theft.

3. Patent Licensing and Efficiency

In the event that the innovator is not the most efficient manufacturer or seller, it may consider licensing its innovation. Like any voluntary contract, a patent license is mutually beneficial. The licensee gets access to useful technology and the licensor earns a royalty.[191] Such royalties can be a powerful stimulus for innovation, especially for innovators without manufacturing capability.[192] For many technologies, licensing ensures that a particular innovation is operationalized at all; otherwise, no consumer benefits would flow directly from the advance in know-how. For example, when a company invents a new product but lacks sufficient manufacturing capacity, licensing a qualified manufacturer ensures that consumers have access to the new product. Multiple licensees can improve the competitive landscape even more by competing against each other—such as by offering valuable services—and perhaps by enhancing the product in the hopes of obtaining an improvement patent.

Many valuable technologies remain unused because the market for technology licenses is fragmented and imperfect.[193] It can be difficult for technology owners and potential users of that technology to link up. Licensing trade secrets is particularly tricky because

> with complex technologies, the prospective licensee or purchaser often lacks information about the quality of the technology. The inventor wants to convey information about the technology in order to conclude the transaction. One way to do this is to reveal some technical details, but doing so might expose the inventor to a risk of expropriation . . . .[194]

190. Whether the excluded producer is actually more efficient than the patent thief is not an element of liability; monopolization through patent theft should violate Section 2 regardless. These efficiency arguments present broad-based policy rationales for why this category of conduct—patent theft—is an appropriate concern of antitrust law.

191. *See* SCOTCHMER, *supra* note 104, at 161 ("Licensing is generally good for both users and innovators, since it increases the use of knowledge."); *see also* Brulotte v. Thys Co., 379 U.S. 29, 33 (1964) (The "patent empowers the owner to exact royalties as high as he can negotiate with the leverage of that monopoly.").

192. *See* HOVENKAMP, JANIS, LEMLEY & LESLIE, *supra* note 79, § 14.3b ("Many patented innovations are developed by people or firms who lack the capacity or desire to practice the patent themselves. For them, the incentive to innovate comes entirely from their ability to license the patent to others.").

193. *See* BESSEN & MEURER, *supra* note 98, at 179–83.

194. *Id.* at 184 (citing Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, *in* THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS 609, 609–25 (1962)).

The threat of patent theft renders the market for technology licensing less efficient because if patent theft appears to be cost-beneficial, then innovative firms will have less incentive to license their trade secrets. Misappropriation of another's patent—of the type alleged in *Brunswick*—reduces innovation and consumer welfare by making it harder for patentees to license patents due to fear of theft by the licensee. The threat of patent theft injures consumers by creating a disincentive to license trade secrets.

In sum, although licensing is efficient, the risk of patent theft may reduce an innovator's willingness to license its trade secrets to other companies.

IV. ANTITRUST LIABILITY FOR MONOPOLIZATION THROUGH PATENT THEFT

In *Walker Process*, the Supreme Court held that enforcing a patent acquired through fraud on the PTO constitutes monopoly conduct.[195] Thus, if the plaintiff can also establish that the patentee-defendant possesses monopoly power, a prima facie case of illegal monopolization has been established.[196] This Part explains how patent theft falls within the reach of *Walker Process* and how monopolization through patent theft satisfies the elements of the *Grinnell* test.

A. MONOPOLIZATION THROUGH PATENT THEFT VIOLATES SECTION 2

To prove a violation of Section 2 of the Sherman Act, a plaintiff must satisfy the two elements of the *Grinnell* test, namely, that the defendant possesses monopoly power in a relevant market and that it has engaged in monopoly conduct to acquire or maintain that power.[197] In addition to these two elements, a private plaintiff must also show that it has suffered antitrust injury, which is an injury caused by a reduction in competition. If the plaintiff can establish the prima facie case for Section 2 liability, the defendant can still escape liability if it can show that it had a legitimate business justification for engaging in the challenged conduct.

1. Monopoly Power

Stealing a patent does not automatically create antitrust problems. Section 2 of the Sherman Act requires that the defendant possess monopoly power in a relevant market. This is the first element of the *Grinnell* test. Thus, the plaintiff must prove that the patent thief is a monopolist.[198] That said, stolen patents may be more likely to confer market power than the average patent. A patent that is worth stealing is one that the thief likely perceives will give the patentholder the

195. *See* Walker Process Equip., Inc. v. Food Mach. & Chem. Corp., 382 U.S. 172, 174 (1965).

196. *See id.* ("We have concluded that the enforcement of a patent procured by fraud on the Patent Office may be violative of § 2 of the Sherman Act provided the other elements necessary to a § 2 case are present.").

197. *See supra* notes 18–28 and accompanying text.

198. *See, e.g.*, C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1367 (Fed. Cir. 1998).

ability to charge a supracompetitive price by excluding competitors. Otherwise, the theft is not worth the risk.[199]

The *Brunswick* opinion's holding that "[t]he patent must dominate a real market" is an attempt to operationalize the fact that not all patents confer market power.[200] The Supreme Court recognized this in *Walker Process* when it held that patent fraud alone did not establish a violation of Section 2.[201] Courts and commentators uniformly agree that maintaining a patent does not automatically confer monopoly power.[202] Thus, in *Walker Process* litigation, the antitrust plaintiff must independently prove that the defendant possesses monopoly power in a relevant market, *Grinnell*'s first element. Judge Posner correctly noted that a patent may not confer market power if the invention has no commercial value or if noninfringing substitutes exist.[203] However, an individual patent need not "dominate a real market" in order to confer monopoly power on the patentholder. As shown in section III.A, if the stolen patent is the only substitute for the thief's patented technology, a monopolist can maintain its market power through patent theft even though the stolen patent does not itself dominate a real market.[204]

2. Monopoly Conduct

Patent theft should constitute monopoly conduct. This section explains how monopolization through patent theft "tends to impair the opportunities of rivals" and "does not further competition on the merits," thus satisfying the touchstone for monopoly conduct articulated in *Aspen Skiing*.[205] In *Grinnell*, the Supreme Court held that a monopolist is not in violation of Section 2 if its monopoly power is the "consequence of a superior product, business acumen, or historic accident."[206] The patent thief has not created a superior product; he has stolen someone else's. And while some might describe entering a confidentiality agreement in order to gain access to and steal another firm's trade secrets as

199. The risks of patent theft include potential liability for violating various state laws. *See infra* notes 218–19 and accompanying text. These state remedies may not, however, be sufficient to deter patent theft and to compensate all of the victims of patent theft. *See infra* notes 251–55 and accompanying text.

200. Brunswick Corp. v. Riegel Textile Corp., 752 F.2d 261, 265 (7th Cir. 1984).

201. *See Walker Process Equip.*, 382 U.S. at 177.

202. *See* Ill. Tool Works Inc. v. Indep. Ink, Inc., 547 U.S. 28, 31 (2006) ("[T]he mere fact that a tying product is patented does not support [a market power] presumption."); U.S. DEP'T OF JUSTICE & FTC, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY § 2.2 (1995), *available at* http://www.usdoj.gov/atr/public/guidelines/0558.pdf ("The Agencies will not presume that a patent, copyright, or trade secret necessarily confers market power upon its owner.")

203. *See Brunswick*, 752 F.2d at 265–66.

204. Judge Posner's opinion also overlooks that Section 2 of the Sherman Act condemns attempted monopolization. Although *Walker Process* liability exists for both illegal monopolization and attempted monopolization, the *Brunswick* decision "ignores the possibility of an attempt claim based on a dangerous probability of success." HOVENKAMP, JANIS, LEMLEY & LESLIE, *supra* note 79, § 11.4c n.251.

205. Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 605 n.32 (1985).

206. United States v. Grinnell Corp., 384 U.S. 563, 570–71 (1966).

"business acumen," antitrust law does not.

Patent theft should satisfy the monopoly conduct element of the *Grinnell* test because patent theft is a species of patent fraud. In *Walker Process*, the Supreme Court held that acquiring or maintaining monopoly power by procuring a patent through fraud on the Patent Office is monopoly conduct.[207] Holding aside Brunswick's request that the patent be assigned to it, Riegel's alleged conduct looks like a traditional *Walker Process* violation, in that the antitrust defendant acquired a monopoly by committing fraud on the Patent Office and then used this fraudulently obtained patent to exclude competitors.

An antitrust cause of action based on *Walker Process* requires that the patent fraud be material. "Materiality is shown if 'but for' the misrepresentation, the patent would not have issued."[208] In *Brunswick*, Judge Posner held that patent theft does not satisfy the materiality requirement, which he defined as "but for the fraud no patent would have been issued *to anyone*."[209] Subsequent courts have cited *Brunswick* for the proposition that

> [f]or antitrust purposes, whether a patent could be issued matters more than who would possess it; if a patent could still "have been issued to someone," its market power would still have been concentrated (properly) in one party. As a result, *Walker Process* fraud must concern a material issue of patentability; otherwise, a patent would have issued regardless of any fraud, and potential plaintiffs would have suffered the same monopoly effects (but legitimately).[210]

Judge Posner's conception of materiality is overly constrained. The "but for" materiality means that but for the fraud, the patent would not have issued to *this* patent applicant, not that but for the fraud, the patent would not have issued to anyone. But for a misrepresentation of inventorship, a patent thief would not be issued a patent.[211] That makes the misrepresentation material because "[t]he validity of a patent requires that the inventors be correctly named."[212] Much patent law is based on the assumption that the patent applicant is the true inventor. For example, "[t]he presumption of the validity of a patent includes a presumption that the original inventor is named."[213] Who invented the patented

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207. *See* Walker Process Equip., Inc. v. Food Mach. & Chem. Corp., 382 U.S. 172, 174 (1965).

208. Litton Indus. Prods., Inc. v. Solid State Sys. Corp., 755 F.2d 158, 166 (Fed. Cir. 1985).

209. Brunswick Corp. v. Riegel Textile Corp., 752 F.2d 261, 265 (7th Cir. 1984) (emphasis added).

210. *In re* DDAVP Direct Purchaser Antitrust Litig., 585 F.3d 677, 693 (2d Cir. 2009) (citation omitted) (citing *Brunswick*, 752 F.2d at 265).

211. Patent law requires that the patent application name the actual human inventor even when the patent issues to a company, such as the inventor's employer. *See* 35 U.S.C. § 115 (2012); Joshua L. Simmons, *Inventions Made for Hire*, 2 N.Y.U. J. INTELL. PROP. & ENT. L. 1, 3 n.3 (2012) ("[O]nly the actual inventor is entitled to a patent, and only the inventor or someone he has assigned his patent rights to in writing may file a patent application, which in either case must be made on the inventor's behalf.").

212. Chou v. Univ. of Chi., 254 F.3d 1347, 1359 (Fed. Cir. 2001); *see also* Pannu v. Iolab Corp., 155 F.3d 1344, 1349 (Fed. Cir. 1998) (collecting cases).

213. Maxwell v. K Mart Corp., 880 F. Supp. 1323, 1331 (D. Minn. 1995).

product (or process) is material.[214] Misrepresenting inventorship in order to receive a patent that one has not earned constitutes material fraud.

Stealing the intellectual property of a competitor constitutes monopoly conduct because it is exclusionary but does not constitute competition on the merits. Although Judge Posner labels the illegal monopolist's misdeeds as "skullduggery,"[215] his terminology is merely a more colorful way of saying "not competition on the merits." Antitrust cares about competition, including the competitive process to acquire the patent. Any conduct by a monopolist "that impairs the opportunities of rivals and either does not further competition on the merits or does so in an unnecessarily restrictive way may be deemed anticompetitive."[216] The theft of someone else's patent is exclusionary conduct as that phrase is used in Section 2 jurisprudence.

First, the commission of a crime or tort cannot be competition on the merits. Stealing the intellectual property of another company and misrepresenting it as your own to the PTO is not competition on the merits because it is illegal. Patent theft can violate myriad state and federal laws, including breach of contract, theft of trade secrets and confidential information, unfair competition, and tortious interference with prospective relations.[217] In addition to common law causes of action, some states have statutes that criminalize the theft of trade secrets,[218] as does federal law. In no jurisdiction is misappropriating trade secrets considered competition on the merits.[219]

Second, in non-intellectual property contexts, antitrust cases hold that stealing a competitor's property does not constitute competition on the merits. For example, the Sixth Circuit held that there was sufficient evidence for a jury to conclude that the United States Tobacco Company engaged in monopoly con-

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214. *See In re* Metoprolol Succinate Patent Litig., No. MDL NO. 1620, 2006 WL 120343, at *15 (E.D. Mo. Jan. 17, 2006) ("Because it is a critical requirement for obtaining a patent, the issue of inventorship is highly material in the patent prosecution process."), *aff'd in part, vacated in part,* 494 F.3d 1011 (Fed. Cir. 2007); U.S. PATENT & TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 2001.06(c) (8th ed. rev. 9, Oct. 2012) [hereinafter MPEP] ("Where the subject matter for which a patent is being sought is or has been involved in litigation, the existence of such litigation and any other material information arising therefrom must be brought to the attention of the [PTO]. Examples of such material information include . . . questions of inventorship . . . ."); *see also* PerSeptive Biosystems, Inc. v. Pharmacia Biotech, Inc., 225 F.3d 1315, 1318–19 (Fed. Cir. 2000) (misrepresenting inventorship is material for inequitable conduct purposes); *id.* at 1321 (citing MPEP § 2001.06(c), *supra*, for the proposition that "inventorship disputes are material information"); Robert A. Armitage, *Understanding the America Invents Act and Its Implications for Patenting*, 40 AIPLA Q.J. 1, 108 (2012) (discussing inventorship after the America Invents Act).

215. *Brunswick*, 752 F.2d at 265.

216. Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297, 308 (3d Cir. 2007).

217. *See, e.g.*, Chou v. Univ. of Chi., 254 F.3d 1347, 1360–66 (Fed. Cir. 2001) (finding fraudulent concealment, breach of fiduciary duty, unjust enrichment, and breach of contract implied in law); Pension Advisory Grp., Ltd. v. Country Life Ins. Co., 771 F. Supp. 2d 680, 697–98 (S.D. Tex. 2011).

218. *See, e.g.*, *Pension Advisory Grp.*, 771 F. Supp. 2d at 703 (discussing the Texas Theft Liability Act, TEX. CIV. PRAC. & REM. CODE ANN. § 134.003(a) (West 2013)).

219. *See, e.g.*, Albert Pick-Barth Co. v. Mitchell Woodbury Corp., 57 F.2d 96 (1st Cir. 1932); *see also* HOVENKAMP, JANIS, LEMLEY & LESLIE, *supra* note 79, § 11.5 (discussing the *Pick-Barth* doctrine).

duct when it took its competitor's point-of-sale advertising displays and threw them in the trash.[220] The monopolist in that case had essentially stolen its competitor's property in order to make that competitor less viable. The theft of intellectual property, as alleged in *Brunswick*, is even more egregious. Not only did the monopolist take property away from its competitor, it claimed that property as its own and used it to stifle competition.

Third, patent theft is a species of deception. Courts have held that the use of deception to acquire or maintain monopoly power can constitute monopoly conduct. For example, Microsoft violated Section 2 of the Sherman Act when it monopolized the market for operating systems, in part, by deceiving software application developers that programs written on Microsoft's version of Java would run on any operating system.[221] The alleged conduct in the *Brunswick* case resembles deception in that the monopolist acquired its competitor's intellectual property by representing that it would be a trustworthy licensee of the trade secret and would not seek a patent on an invention that was not theirs.

In sum, stealing is never competition on the merits. It is strange to conclude, as the *Brunswick* rule requires, that antitrust law has nothing to say about a monopolist who acquires its market power through theft instead of competition on the merits. The nonpatentability element created by the *Brunswick* opinion ignores that antitrust liability is a function of *how* the monopolist acquired (or maintained) its monopoly power.[222] Monopolization through patent theft involves conduct that inherently distorts the competitive process. For the competitive process to operate efficiently, it must have integrity—a set of basic rules that all firms abide by. For example, a firm cannot destroy its rival's factory. Patent fraud by stealing another's patentable invention harms the competitive process. If a monopolist acquires its monopoly through theft it is impossible to escape the conclusion that the monopoly is illegal.

3. Antitrust Injury

In addition to the *Grinnell* elements, a private plaintiff bringing a Section 2 case must prove that it has suffered antitrust injury. Antitrust injury is "injury of the type the antitrust laws were intended to prevent and that flows from that which makes defendants' acts unlawful."[223] Antitrust injury is often considered as part of a larger discussion of antitrust standing, which courts use as a prudential matter to determine whether the antitrust plaintiff before them is an appropriate complainant.[224] Patent fraud in general satisfies the requirements of antitrust

220. *See* Conwood Co. v. U.S. Tobacco Co., 290 F.3d 768, 788 (6th Cir. 2002).

221. *See* United States v. Microsoft Corp., 253 F.3d 34, 76–77 (D.C. Cir. 2001).

222. *See* United States v. Grinnell Corp., 384 U.S. 563, 570–71 (1966).

223. Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477, 489 (1977).

224. Courts consider the following factors when analyzing whether a plaintiff has antitrust standing: "(1) the nature of the plaintiff's alleged injury; that is, whether it was the type the antitrust laws were intended to forestall; (2) the directness of the injury; (3) the speculative measure of the harm; (4) the risk of duplicative recovery; and (5) the complexity in apportioning damages." Amarel v. Connell, 102

injury and antitrust standing for excluded competitors and consumers.[225] Victims of patent theft should similarly have access to antitrust courts. Both the true inventor whose patentable idea was stolen and the consumers who pay a supracompetitive price to the patent thief suffer cognizable antitrust injuries and should have standing to bring Section 2 claims based on monopolization through patent theft.

The inventor whose idea was stolen is the most logical plaintiff because its injury is most direct. Judge Posner acknowledged that "competitors are thought to be effective (maybe indispensible) surrogates for the many consumers who do not realize they are the victims of monopolistic practices."[226] But he argued that the true inventor does not act as a surrogate in the context of patent theft. Instead, he asserted that consumers are unaffected by who controls any particular monopoly-granting patent and thus "a victory for the competitor can confer no benefit, certain or probable, present or future, on consumers."[227] Judge Posner concluded that he "cannot find the consumer interest in this case."[228] Consequently, according to Judge Posner, competitors are not appropriate plaintiffs to bring antitrust claims based on patent theft.[229]

Providing antitrust standing to the true inventor can protect the consumer interest in preserving dynamic competition and the incentives for innovation. Patent theft can create market power that would not otherwise exist; it can increase price and reduce efficiency. All of these hurt consumer interests in a competitive economy.[230] Patent theft is fundamentally an assault against the competitive process, which consumers rely on both to reduce short-term price and increase long-term quality. Just because the *Walker Process* plaintiff is a competitor of the illegal monopolist does not change the facts that the patent thief is in possession of monopoly power that it stole from its rightful owner and that the inventor-plaintiff suffered a loss caused by the illegal monopolist's

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F.3d 1494, 1507 (9th Cir. 1996) (citing Associated Gen. Contractors of Cal., Inc. v. Cal. State Council of Carpenters, 459 U.S. 519, 535 (1983)).

225. *See* Unitherm Food Sys., Inc. v. Swift–Eckrich, Inc., 375 F.3d 1341, 1362 (Fed. Cir. 2004) (finding that excluded competitor has standing to bring *Walker Process* claim); TransWeb, LLC v. 3M Innovative Props. Co., No. 10-4413 (FSH), 2011 WL 2181189, at *20 (D. N.J. June 1, 2011) ("A foreclosure of competition as a result of the enforcement of an allegedly fraudulently prosecuted patent would be the type of injury to competition that the antitrust laws are meant to protect." (citing Amgen, Inc. v. F. Hoffmann–La Roche Ltd., 480 F. Supp. 2d 462, 468 (D. Mass. 2007), for the proposition that allegations of anticompetitive harm flowing from *Walker Process* fraud constitutes antitrust injury")).

226. Brunswick Corp. v. Riegel Textile Corp., 752 F.2d 261, 266 (7th Cir. 1984).

227. *Id.*

228. *Id.* at 267.

229. *See id.*; *see also* Columbia River People's Util. Dist. v. Portland Gen. Elec. Co., 217 F.3d 1187, 1190 (9th Cir. 2000) (discussing *Brunswick*).

230. The concept of antitrust injury is not limited to price increases for consumers. *See* Blue Shield of Va. v. McCready, 457 U.S. 465, 482–83 (1982) ("[W]hile an increase in price resulting from a dampening of competitive market forces is assuredly one type of injury for which § 4 potentially offers redress, that is not the only form of injury remediable under § 4." (citation omitted)).

misconduct.[231]

Furthermore, in addition to the true inventor, any competitors that the monopolist-patent thief excluded from the market have suffered antitrust injury and should have standing to bring a Section 2 case.[232] Rivals excluded from the market by a monopolist's anticompetitive conduct are traditional Section 2 plaintiffs.[233] They should be, too, in cases of monopolization through patent theft. Consider the *American Cyanamid* case in which the pharmaceutical giant stole and patented a discovery made by two researchers from the University of Colorado.[234] American Cyanamid brought at least six infringement suits to enforce its stolen patents against generic manufacturers in order to exclude them from the market.[235] The targets of those lawsuits should be able to bring *Walker Process* claims against American Cyanamid in order to recover both their lost profits and their litigation costs from the prior infringement suits. Recovery is particularly appropriate because the true inventors had no desire or intent to exclude firms from utilizing their discovery. But even when the rightful patent owner would enforce its exclusionary rights, the patent thief has illegally excluded rivals from the market, and that entitles them to recompense.

The *Brunswick* opinion also suggests that consumers should not have standing in cases of patent theft because consumer welfare is unaffected, and thus no antitrust injury has been suffered. Consumers represent a traditional category of Section 2 plaintiffs because they suffer antitrust injury whenever they pay a supracompetitive price to an illegal monopolist.[236] The fact that someone else might have been able to legally charge them that higher amount does not excuse the wrong that the theft-based monopolist committed against those consumers. The illegal monopolist committed a wrong against the consumer even if someone else could have done the same thing legally. Furthermore, even if consumers pay the same price regardless of who gets the patent, antitrust law cares about the competitive process, not only the outcomes for consumers. Antitrust law seeks to create incentives for proper competitive conduct and to deter anticompetitive conduct. Just as consumers have standing to bring *Walker*

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231. *See* HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY § 16.3f (4th ed. 2011) (noting that victim of patent theft by monopolist should have antitrust standing).

232. In *Eastman Kodak Co. v. Goodyear Tire & Rubber Co.*, the court denied standing to a defendant in a patent infringement case to argue that the plaintiff had acquired its patent in violation of the Sherman Act. 114 F.3d 1547, 1557–58 (Fed. Cir. 1997), *abrogated by* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448 (Fed. Cir. 1998). The court reasoned that the alleged infringer had not suffered antitrust injury because it would have infringed the patent no matter what party rightfully owned it. *Id.* But the court did not deal with the contention that not every patentee would similarly enforce the patent.

233. *See, e.g.*, LePage's Inc. v. 3M, 324 F.3d 141, 145 (3d Cir. 2003) (en banc) (holding a competitor-plaintiff victorious in Section 2 litigation against monopolist that used bundled rebates).

234. *See* Univ. of Colo. Found., Inc. v. Am. Cyanamid Co., 153 F. Supp. 2d 1231, 1242 (D. Colo. 2001).

235. *See* Univ. of Colo. Found., Inc. v. Am. Cyanamid Co., 342 F.3d 1298, 1303 (Fed. Cir. 2003).

236. *See* Christopher R. Leslie, *Antitrust Damages and Deadweight Loss*, 51 ANTITRUST BULL. 521, 555 (2006).

Process claims based on traditional ordinary patent fraud, they should have standing to pursue *Walker Process* claims against patent thieves who illegally monopolize markets.[237]

Finally, even if antitrust injury were difficult to prove for private plaintiffs, the federal antitrust agencies do not have to prove antitrust injury to bring a successful claim.[238] Even if neither the true inventor nor the affected consumers were considered appropriate antitrust plaintiffs, the government could bring an antitrust suit against a patent thief for illegally monopolizing a market through patent theft. Thus, if Brunswick's allegations are correct, Reigel has acquired monopoly power to which it is not entitled. It did not acquire the monopoly power through a superior product, business acumen, or historic accident; in acquired it by theft. Either the FTC or the DOJ Antitrust Division could pursue civil litigation against a patent thief for violating Section 2 of the Sherman Act.

4. No Defense for Patent Theft

After the plaintiff proves a prima facie Section 2 case, the defendant "may proffer a 'procompetitive justification' for its conduct."[239] Acquiring or maintaining monopoly power through patent holdings is generally a defense to Section 2 liability.[240] The patent defense to claims of illegal monopolization, however, requires that the patent be properly enforceable by the patentholder. A fraudulently procured patent does not provide a defense.[241] In the context of monopolization through patent theft, the general patent defense does not apply because the defendant is not the legitimate owner of a valid patent. Furthermore, because patent theft violates the basic rules of the patent system, antitrust immunity should not attach.[242]

The *Brunswick* rule makes a critical distinction between fraud that causes the PTO to issue a patent that should not have been issued to anyone and fraud that results in the patentee acquiring a patent that should have gone to someone else. Judge Posner asserts that "[t]he power over price that patent rights confer is lawful, and is no greater than it otherwise would be just because the person

237. Consumer standing includes state attorneys general who may bring *parens patriae* suits in the names of the consumers who reside in their states and who have suffered antitrust injury as a result of the illegal monopolization. *See* Christopher R. Leslie, *The Role of Consumers in* Walker Process *Litigation*, 13 SW. J.L. & TRADE AM. 281, 302 (2007).

238. *See In re* Canadian Imp. Antitrust Litig., 470 F.3d 785, 791 (8th Cir. 2006).

239. United States v. Microsoft Corp., 253 F.3d 34, 59 (D.C. Cir. 2001) (citing Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 483 (1992)).

240. *See* United States v. Line Material Co., 333 U.S. 287, 305 (1948) ("Within the limits of the patentee's rights under his patent, monopoly of the process or product by him is authorized by the patent statutes.").

241. *See* Unitherm Food Sys., Inc. v. Swift–Eckrich, Inc., 375 F.3d 1341, 1356 (Fed. Cir. 2004); Baxa Corp. v. McGaw, Inc., 996 F. Supp. 1044, 1048 (D. Colo. 1997) ("Therefore, ownership of a valid patent precludes antitrust liability for monopolization of a product or process within the scope of the patent." (citing Simpson v. Union Oil Co., 377 U.S. 13, 24 (1964))).

242. *See Unitherm Food Sys.*, 375 F.3d at 1356 (noting that antitrust immunity applies to "behavior conforming to the patent laws").

exercising the rights is not the one entitled by law to do so."[243] But the defendant's power over price is not lawful if it acquired that power through theft; it is not the lawful owner of the patent. The fact that someone else could have monopolized the market legally should not be a defense for the monopolist that acquired its market power through predatory conduct. The law is filled with instances where one party may successfully use a defense that another defendant may not.[244] Thus, just because the actual inventor could have legally acquired the monopoly without engaging in illegitimate conduct does not mean that a patent thief's monopoly is lawful despite engaging in illegitimate conduct.

Allowing the traditional patent defense in Section 2 cases involving patent theft would ignore antitrust law's concern over *how* a monopolist acquires its power. The *Brunswick* rule essentially eliminates the second element of the *Grinnell* test that focuses on how the monopolist acquired its monopoly power. The nonpatentability element holds that so long as the monopoly power can be held lawfully by one firm, it is lawful under antitrust laws for another firm to acquire that same monopoly power by any means necessary. In short, the fact that someone else could legally acquire the patent does not provide a defense to antitrust liability for the patent thief who monopolizes a market with a stolen patent. Patent theft is *never* defensible.[245]

B. THE RELATIONSHIP BETWEEN ANTITRUST LIABILITY AND THE PATENT SYSTEM

A recurrent issue at the intersection of antitrust and intellectual property is whether the prospect of antitrust liability will undermine the patent system's ability to stimulate innovation. Antitrust law and intellectual property rights exist in a delicate balance. While antitrust law condemns exclusionary conduct, the patent system awards the right to exclude to innovative firms. For those instances when the patent confers monopoly power, the suspension of competition is tolerated as the price of encouraging innovation.[246] Proponents of weak antitrust enforcement fear that an aggressive approach to patentholders would weaken the incentive to innovate and to disclose one's innovation in exchange for exclusionary rights. For example, federal courts have split as to when a monopolist's refusal to license its intellectual property violates Section 2, with the Federal Circuit advocating a wide antitrust leeway for patentholders.[247]

Monopolization through patent theft upsets the balance struck between anti-

243. Brunswick Corp. v. Riegel Textile Corp., 752 F.2d 261, 265 (7th Cir. 1984).

244. For example, in many cases, only one specific person may claim a particular tax exemption or assert a right of self-defense.

245. *Cf.* SULLIVAN & GRIMES, *supra* note 82, § 15.8b (stating that patent fraud "independently violates the patent law and other criminal statutes and fails of any credible justification").

246. *See* Christopher R. Leslie, *Patent Tying, Price Discrimination, and Innovation*, 77 ANTITRUST L.J. 811, 834–35 (2011).

247. *Compare* Image Technical Servs., Inc. v. Eastman Kodak Co., 125 F.3d 1195, 1218–20 (9th Cir. 1997) (upholding jury verdict finding monopolist's refusal to license violated Section 2 based on facts), *with In re* Indep. Serv. Orgs. Antitrust Litig., 203 F.3d 1322, 1326 (Fed. Cir. 2000) (rejecting claim that monopolist's refusal to license violated Section 2).

trust law and awarding exclusionary rights to patentees. Patent theft strikes at the heart of the patent bargain because the patent thief does not engage in innovation and therefore has not earned the right to exclude competitors. The monopolist who has stolen the invention of another firm and misrepresented it as its own has done nothing to earn protection against antitrust liability. Patent theft undermines confidence in the patent system because it denies the true inventor the reward for her invention, which can reduce the incentive to innovate.[248] Consequently, the goals of both antitrust law (short-term price competition) and patent law (long-term incentives to innovate) are thwarted.

Some may argue that patent law, not antitrust law, should address the problem of patent theft. For example, the *Brunswick* opinion asserted that "[i]t is not a purpose of antitrust law to confer patents or to resolve disputes between rival applicants for a patent."[249] It is true that patent law can reassign the patent to the proper party through an interference proceeding. This is the tack that Brunswick initially took, waiting a decade in interference limbo before bringing its antitrust lawsuit against Riegel.

The patent system should certainly try to minimize patent theft, but patent law alone cannot solve the problem of patent theft because patent law is not designed to create causes of action against patentholders, even those who acquire their patents illegally. The patent system gives rights *to* patentholders, not against them. In order to properly address patent theft, the legal system should achieve four related goals: "1) stop on-going misconduct and its effects; 2) disgorge the ill-gotten gains received through the misconduct; 3) deter the misconduct in the future; and 4) compensate the victims of the misconduct."[250] Patent law can accomplish the first goal through a patent interference proceeding that reassigns the patent to its true inventor.

Patent law, however, fails to achieve the three remaining goals. First, patent law does not disgorge ill-gotten gains. It provides no mechanism to make a patent thief pay back any monopoly profits or royalties received as a result of the stolen patent.[251] Second, patent law cannot deter patent theft because it does not punish patent theft. Because patent law does not offer a cause of action for patent theft, it does not provide for damages against patentees who steal the inventions of others and misrepresent them as their own in order to secure someone else's patent. Consequently, patent law does not provide a meaningful disincentive to engage in patent theft. Finally, patent law does not compensate

248. Although Judge Posner argued that Riegel's alleged patent theft is beneficial to consumers because this means that the alleged thief and true inventor can compete against each other, *Brunswick*, 752 F.2d at 267, his argument proves too much because such reasoning justifies invalidating the patent in any antitrust case where patent validity is at issue.

249. *Id.*

250. Leslie, *supra* note 163, at 1286.

251. To the extent that patent theft constitutes inequitable conduct, the patent would be rendered unenforceable. But that would not disgorge any ill-gotten gains collected before the finding of inequitable conduct.

the victims of patent theft, either the true inventor or consumers. An interference proceeding that eventually awards the patent to its proper owner does not compensate the true inventor for the time that it was denied its patent rights. Neither does patent law provide any compensation for consumers who have paid a monopoly price to the patent thief when the true inventor might have shared the innovation freely with the world.[252] Moreover, patent law does not compensate for the injury to competition, including the reductions in innovation and efficiency, that patent theft may cause.

In contrast to patent law, an antitrust remedy for patent theft can fulfill the related goals of disgorgement, deterrence, and compensation. The Sherman Act provides that the successful antitrust plaintiff is entitled to treble damages and reasonable attorneys' fees.[253] The direct victim of the patent theft could sue for its lost profits, as can competitors who were excluded from the market by the stolen patent. Consumers could sue the patent thief for the amount that they were overcharged. All of these damages by any of these plaintiffs are automatically tripled. The amount of damages awarded to the successful antitrust plaintiff would thus be sufficiently high to disgorge the ill-gotten gains of the illegal monopolist.

Antitrust liability for monopolization through patent theft also better optimizes deterrence. An interference proceeding does not create a sufficient deterrent against the initial theft, which can still be net beneficial if the thief receives monopoly profits in the short run and can be wildly beneficial if it can somehow get away with it.[254] In contrast to the remedial approach of the patent system, the treble damages awarded to a successful Section 2 plaintiff provide a meaningful deterrent against stealing patentable products in the first place. By helping to deter patent theft, antitrust liability can help the patent system operate more efficiently.

Furthermore, these sums should compensate all of the various categories of patent theft victims for their losses. Achieving this set of goals is important because it helps restore the incentive structure underlying the patent system. After all, without an antitrust claim for patent theft that actually compensates them for any losses, innovators may have less incentive to invest in research or to license their trade secrets.

Other non-patent areas of law are similarly constrained in their ability to address the problem of patent theft. For example, some instances of patent theft may violate trade secret law, which punishes misappropriations of trade secrets. But trade secret law may not deter patent theft as effectively as antitrust liability because trade secret law does not provide for automatic treble damages

252. *See, e.g.*, Univ. of Colo. Found., Inc. v. Am. Cyanamid Co., 153 F. Supp. 2d 1231, 1243–46 (D. Colo. 2001).

253. *See* 15 U.S.C. § 15 (2012).

254. Even with an antitrust remedy, there is still a chance of the patent thief profiting from misconduct, but there is now also a powerful potential cost in the form of treble damages, which can make the expected value of the theft net negative.

and recovery of attorneys' fees.[255] Moreover, patent theft is worse than mere misappropriation of a trade secret because the thief does not simply steal a trade secret, but also obtains a patent that would prevent the innovator from exploiting her own invention. Trade secret law does not provide recovery for excluded competitors or overcharged consumers in cases where the patent thief behaves more aggressively than the true inventor would have. Finally, trade secret law provides no remedy when the patent theft does not involve misappropriation of a trade secret, as in the *FilmTec* case.[256]

Patent theft may constitute a breach of contract as when (as alleged in *Brunswick*) a licensee purloins the licensor's technology and patents it in violation of the licensing agreement. Contract law remedies are insufficient to deter patent theft because they provide merely for expectation damages, not treble damages or attorneys' fees. Contract law does not provide a remedy for consumer injuries associated with patent theft.[257] Finally, not all patent theft will necessarily constitute a breach of contract. For example, if a rival were to break into an innovator's facilities in order steal an idea and apply for a patent, the applicant has committed patent theft but not breach of contract. Antitrust liability can provide a recovery in situations where contract law does not.

The law of unjust enrichment can achieve some of the goals that cannot be attained through either contract or intellectual property law. Patent theft can give rise to a claim for unjust enrichment.[258] In such cases, courts have approved disgorgement of a patent thief's ill-gotten gains as an appropriate remedy.[259] Disgorgement, however, may be necessary but not sufficient to deter patent theft because so long as liability is uncertain, patent theft has a positive expected value. In contrast, because antitrust law awards treble damages, antitrust violations can have a negative expected value even though detection and enforcement are less than perfect.

These non-antitrust causes of action for patent theft hold one major advantage over an antitrust solution. Section 2 liability requires the plaintiff to prove that the patent thief is a monopolist or enjoys a dangerous probability of acquiring monopoly power through patent theft. The trade secret and contract causes of action have no market power requirement. Patent theft may violate these areas of law regardless of the defendant's monopoly status. This suggests that all of these areas of law—antitrust, trade secret, and contract—should play a role in deterring patent theft and compensating victims. Antitrust law should not supplant other legal remedies for patent theft. The potential for trade secret and

255. Trade secret law may allow for exemplary damages for "willful and malicious misappropriation." *See, e.g.*, CAL. CIV. CODE § 3426.3(c) (West 2014).

256. *See supra* notes 120–23 and accompanying text.

257. A third-party beneficiary theory of recovery may be possible, but most courts would probably find this to be too tenuous.

258. *See, e.g.*, Univ. of Colo. Found., Inc. v. Am. Cyanamid Co., 342 F.3d 1298, 1309–10 (Fed. Cir. 2003).

259. *See id.* at 1311.

contract remedies, however, does not displace the need for antitrust liability when patent theft results in illegal monopolization.

Antitrust liability for patent theft restores the balance between antitrust law and the patent system. The patent system cares about patent applicants honestly representing inventorship. The antitrust regime cares about firms acquiring monopoly power through anticompetitive conduct. When patent theft results in a monopoly, the patent thief is violating both antitrust law and patent law by misrepresenting inventorship in order to secure a patent that rightfully belongs to someone else. Permitting antitrust liability for monopolization through patent theft does not invite antitrust law to meddle improperly in the patent system. Patent law still determines the standards for patentability. Antitrust law becomes relevant only *after* the applicant has already violated the rules of the patent system. Recognizing that *Walker Process* liability includes monopolization through patent theft does not constitute an improper antitrust intrusion onto patent law's turf.

CONCLUSION

The *Brunswick* rule that *Walker Process* liability does not attach if the underlying invention is patentable creates a fundamental distinction between patent fraud and patent theft, in which the latter is exempt from antitrust liability. The premises of the *Brunswick* rule, however, are flawed. Most notably, under certain market conditions, patent theft can lead to monopoly power and higher prices than would otherwise prevail. Furthermore, it can distort innovation and generate inefficiencies, including patent suppression and suboptimal licensing practices.

Most instances of patent theft will probably not violate antitrust law—just as most acts of fraud before the Patent Office do not create antitrust liability—because the misdeed often does not create monopoly power. But probability does not mean impossibility. Patent theft can create monopoly power and distort markets. When a monopolist employs patent theft to acquire or maintain a monopoly, it violates Section 2 of the Sherman Act.